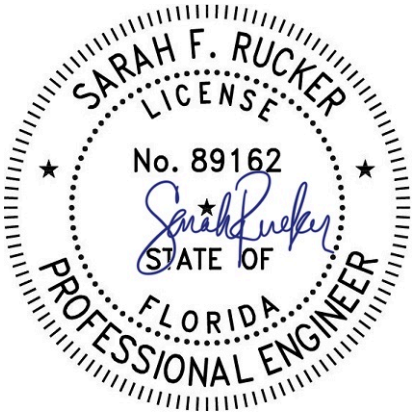
AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	250 ft Self Support Tower
ATC Asset Name	:	Columbia (Charles) FL
ATC Asset Number	:	417139
Engineering Number	:	15468799_C3_02
Proposed Carrier	:	ALLTEL COMMUNICATIONS, LLC
Carrier Site Name	:	COLUMBIA
Carrier Site Number	:	5000091519
Site Location	:	917 SW Charles Terrace Lake City, FL 32024-4402 30.1063° N, 82.7601° W
County	:	Columbia
Date	:	February 3, 2026
Max Usage	:	75%
Analysis Result	:	Pass



This item has been electronically signed and sealed by Sarah F. Rucker, PE on the date shown using a digital signature.

Printed copies are not considered signed and sealed and the signature must be verified on any electronic copies.

Sarah Rucker

Digitally signed by Sarah Rucker
Date: 2026.02.05 06:44:58 -05'00'

COA: 9053

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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 250 ft Self Support tower to reflect the change in loading by ALLTEL COMMUNICATIONS, LLC.

Supporting Documents

Tower:	CellXion File #TALT02291, dated December 6, 2005
Foundation:	CellXion File #TALT02291, dated December 21, 2005
Geotechnical:	SDII Project #30111111, dated April 1, 2005

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	119 mph (3-second gust)
Basic Wind Speed w/ Ice:	No Ice Considered
Code(s):	ANSI/TIA-222-I / 2021 IBC / 8th ED (2023) Florida Building Code
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 1
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	S_{DS} = 0.11, S_{D1} = 0.08
Site Class:	Default

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please reach out to your American Tower contact. If you do not have an American Tower contact and have an Engineering question, please contact **Engineering@americantower.com** Please include the American Tower asset name, asset number, and engineering number in the subject line for any questions.

Structure Usages

Structural Component	Usage	Control	Location	Result
Leg	66.6%	Member X	Section 12	Pass
Diagonal	64.4%	Bolt Bear	Section 2	Pass
Horizontal	24.4%	Block Shear	Section 13	Pass
Bolt	49.2%	-	Section 2	Pass
Serviceability Usage	13.2%	Rotation	Elevation 250 ft	Pass
Foundation	73.1%	Down	Base	Pass
Foundation	71.8%	Moment	Base	Pass
Foundation	75.2%	Shear	Base	Pass
Foundation	70.5%	Uplift	Base	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Uplift (k)	Shear (k)
Self Support Base (Global)	9,422.8	86.6	-	66.6
Self Support Base (Local)	-	476.6	398.4	40.7

Reactions shown are maximum overall and not limited by Load Case excluding Overstrength Load Cases

Foundation usages were calculated by comparing the maximum reactions from this analysis to the reactions from the original design drawings.

ALLTEL COMMUNICATIONS, LLC Final Loading

Elev (ft)	Qty	Equipment
253.0	3	Ericsson AIR 6419 B77D/C-Band (71 lbs)
	1	Unused Reserve (17489.70 sqin)
	1	Raycap RxxDC-6627-PF-48
	3	Ericsson AIR 3283 B25 B66
	6	Commscope NHH-65C-R2B
	3	Ericsson RRUS 4490
250.0	1	Low Profile Platform

Elev (ft)	Lines
253.0	(15) 1 5/8" Coax
	(2) 1.43"(36.4mm) Hybrid

Install proposed lines in the place of the existing ALLTEL COMMUNICATIONS, LLC lines.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment
240.0	4	Ericsson Radio 4480 B71+B85A
	4	Commscope FFVV-65C-R3-V1
	1	Ceragon FibeAir IP-20D-HP
	3	Light Sector Frame
	4	Ericsson AIR 6419 B41
	4	Ericsson Radio 4460 B25+B66
	1	Commscope VHLP3-11WA

(If table breaks across pages, please see previous page for data in merged cells)

Elev (ft)	Lines
240.0	(4) 1.99" (50.7mm) Hybrid
	(1) 1/4" Coax
	(1) 2.17" (55mm) Hybrid

(If table breaks across pages, please see previous page for data in merged cells)

Standard Conditions

All engineering services performed by ATC Tower Services, LLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts, and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of ATC Tower Services, LLC

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, LLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates, and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and ATC Tower Services, LLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

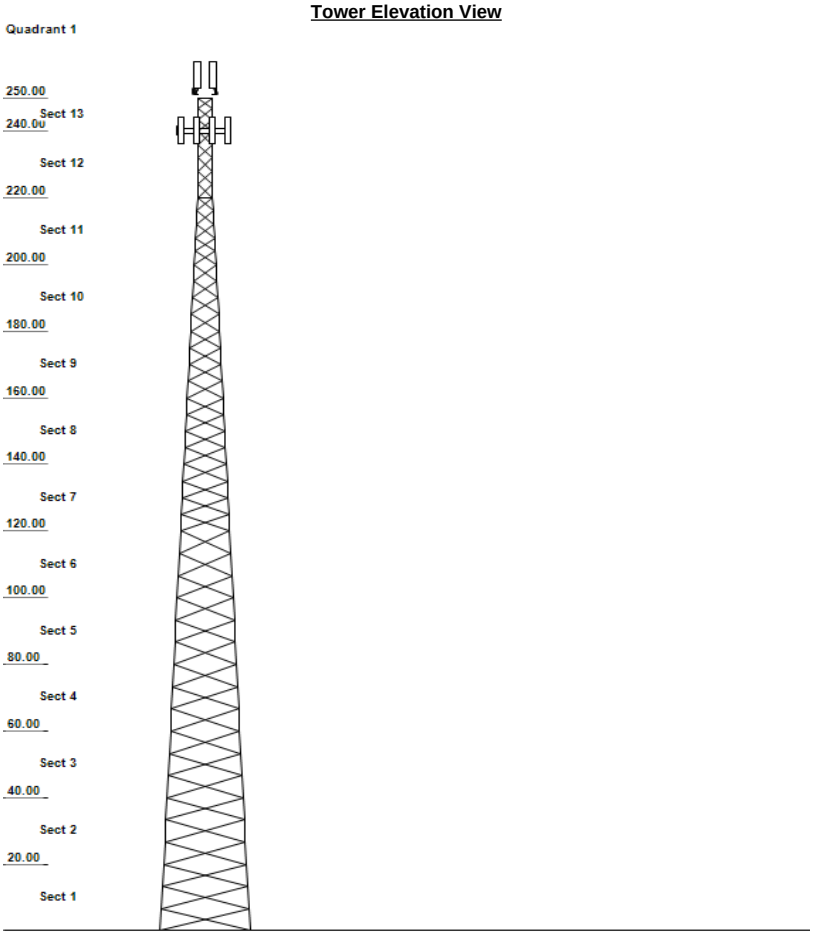
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ASSET:	Columbia (Charles) FL, 417139	CODE:	ANSI/TIA-222-I
CUSTOMER:	ALLTEL COMMUNICATIONS, LLC	PROJECT:	15468799

ANALYSIS PARAMETERS

Design Wind:	119 mph	**Ice Wind:**	30 mph w/ 0.00" ice	**Service Wind:**	60 mph
Risk Category	II	**Exposure:**	C	**S_{DS}:** 0.110	**S_{D1}:** 0.082
Topo Factor:	Method 1	**Topo Feature:**	**Flat**		
Structure Height:	250 ft	**Base Elevation:**	0 ft	**Shape:**	Triangle
Base Width:	24.30 ft	**Top Width:**	4.50 ft		

Tower Elevation View



TOWER SECTION PROPERTIES

Section	Leg Members	Diagonal Members	Horizontal Members
1	SOL 50 ksi 5 1/4" SOLID	SAE 36 ksi 4X4X0.375	
2	SOL 50 ksi 5 1/4" SOLID	SAE 36 ksi 4X4X0.25	
3	SOL 50 ksi 5" SOLID	SAE 36 ksi 4X4X0.25	
4	SOL 50 ksi 5" SOLID	SAE 36 ksi 3.5x3.5x0.25	
5	SOL 50 ksi 4 3/4" SOLID	SAE 36 ksi 3.5x3.5x0.25	
6	SOL 50 ksi 4 1/2" SOLID	SAE 36 ksi 3X3X0.25	
7	SOL 50 ksi 4 1/4" SOLID	SAE 36 ksi 3X3X0.1875	
8	SOL 50 ksi 4" SOLID	SAE 36 ksi 2.5X2.5X0.1875	
9	SOL 50 ksi 3 3/4" SOLID	SAE 36 ksi 2.5X2.5X0.1875	
10	SOL 50 ksi 3 1/2" SOLID	SAE 36 ksi 2X2X0.1875	
11	SOL 50 ksi 3" SOLID	SAE 36 ksi 2X2X0.1875	SAE 36 ksi 2X2X0.1875
12	SOL 50 ksi 2 1/2" SOLID	SAE 36 ksi 2.5X2.5X0.25	
13	SOL 50 ksi 1 3/4" SOLID	SAE 36 ksi 2X2X0.1875	SAE 36 ksi 2X2X0.1875

DISCRETE APPURTENANCE

Elev (ft)	Description
253.0	(6) Commscope NHH-65C-R2B
253.0	(3) Ericsson AIR 6419 B77D/C-Band (71 l
253.0	(1) Raycap RxxDC-6627-PF-48
253.0	(3) Ericsson AIR 3283 B25 B66
253.0	(1) Unused Reserve (17489.70 sqin)
253.0	(3) Ericsson RRUS 4490
250.0	(1) Generic Flat Low Profile Platform
240.0	(4) Ericsson AIR 6419 B41
240.0	(4) Ericsson Radio 4460 B25+B66
240.0	(1) Commscope VHLP3-11WA
240.0	(4) Ericsson Radio 4480 B71+B85A
240.0	(3) Generic Flat Light Sector Frame
240.0	(4) Commscope FFVV-65C-R3-V1
240.0	(1) Ceragon FibeAir IP-20D-HP

LINEAR APPURTENANCE

Elev (ft)	Description
253.0	(15) 1 5/8" Coax
253.0	(2) 1.43"(36.4mm) Hybrid
250.0	(1) Waveguide
250.0	(1) Climbing Ladder
240.0	(1) 2.17" (55mm) Hybrid
240.0	(1) 1/4" Coax
240.0	(4) 1.99" (50.7mm) Hybrid

GLOBAL BASE REACTIONS

	DL+WL	DL+WL+IL
Moment (k-ft):	9,422.82	618.26
Axial (k):	86.65	86.65
Shear (k):	66.61	4.43

INDIVIDUAL BASE REACTIONS

Comp (k):	476.60
Uplift (k):	398.45
Shear (k):	40.70

ANALYSIS PARAMETERS

Location:	Columbia County, FL	**Height:**	250 ft
Type and Shape:	Self Support, Triangle	**Base Elevation:**	0.00 ft
Manufacturer:	Undetermined	**Bottom Face Width:**	24.30 ft
Kd	0.85	**Top Face Width:**	4.50 ft
Ke:	1.00	**Anchor Bolt Detail Type:**	d

ICE & WIND PARAMETERS

Exposure Category:	C	**Design Wind Speed Without Ice:**	119 mph
		Design Wind Speed with Ice:	30 mph
Risk Category:	II	**Operational Windspeed:**	60 mph
Topographic Factor Procedure:	Method 1		
Crest Height(H):	0 ft	**Design Ice Thickness:**	0.00 in
Crest Length(L):	0 ft	**HMSL:**	110 ft
Feature:	Flat	**Distance from Apex (x):**	0
		Upwind/Downwind:	

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	Default			**Period Based on Rayleigh Method (sec):**	1.15
T_L (sec):	8	**P:**	1.3	**C_s:**	0.030
S_{ds}:	0.110	**S_{d1}:**	0.082	**C_s, Max:**	0.030
				C_s, Min:	0.030

LOAD CASES

1.2D + 1.0W Normal	1.2D + 1.0W Normal - 119 mph Wind with No Ice
1.2D + 1.0W 60°	1.2D + 1.0W 60° - 119 mph Wind with No Ice
1.2D + 1.0W 90°	1.2D + 1.0W 90° - 119 mph Wind with No Ice
1.2D + 1.0W 120°	1.2D + 1.0W 120° - 119 mph Wind with No Ice
1.2D + 1.0W 180°	1.2D + 1.0W 180° - 119 mph Wind with No Ice
1.2D + 1.0W 210°	1.2D + 1.0W 210° - 119 mph Wind with No Ice
1.2D + 1.0W 240°	1.2D + 1.0W 240° - 119 mph Wind with No Ice
1.2D + 1.0W 300°	1.2D + 1.0W 300° - 119 mph Wind with No Ice
1.2D + 1.0W 330°	1.2D + 1.0W 330° - 119 mph Wind with No Ice
0.9D + 1.0W Normal	0.9D + 1.0W Normal - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 60°	0.9D + 1.0W 60° - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 90°	0.9D + 1.0W 90° - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 120°	0.9D + 1.0W 120° - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 180°	0.9D + 1.0W 180° - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 210°	0.9D + 1.0W 210° - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 240°	0.9D + 1.0W 240° - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 300°	0.9D + 1.0W 300° - 119 mph Wind with No Ice (Reduced DL)
0.9D + 1.0W 330°	0.9D + 1.0W 330° - 119 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	1.2D + 1.0Di + 1.0Wi Normal - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 60°	1.2D + 1.0Di + 1.0Wi 60° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 90°	1.2D + 1.0Di + 1.0Wi 90° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 120°	1.2D + 1.0Di + 1.0Wi 120° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 180°	1.2D + 1.0Di + 1.0Wi 180° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 210°	1.2D + 1.0Di + 1.0Wi 210° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 240°	1.2D + 1.0Di + 1.0Wi 240° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Di + 1.0Wi 300°	1.2D + 1.0Di + 1.0Wi 300° - 30 mph Wind with 0" Radial Ice

LOAD CASES	
1.2D + 1.0Di + 1.0Wi 330°	1.2D + 1.0Di + 1.0Wi 330° - 30 mph Wind with 0" Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	1.2D + 1.0Ev + 1.0Eh Normal - Seismic
1.2D + 1.0Ev + 1.0Eh 60°	1.2D + 1.0Ev + 1.0Eh 60° - Seismic
1.2D + 1.0Ev + 1.0Eh 90°	1.2D + 1.0Ev + 1.0Eh 90° - Seismic
1.2D + 1.0Ev + 1.0Eh 120°	1.2D + 1.0Ev + 1.0Eh 120° - Seismic
1.2D + 1.0Ev + 1.0Eh 180°	1.2D + 1.0Ev + 1.0Eh 180° - Seismic
1.2D + 1.0Ev + 1.0Eh 210°	1.2D + 1.0Ev + 1.0Eh 210° - Seismic
1.2D + 1.0Ev + 1.0Eh 240°	1.2D + 1.0Ev + 1.0Eh 240° - Seismic
1.2D + 1.0Ev + 1.0Eh 300°	1.2D + 1.0Ev + 1.0Eh 300° - Seismic
1.2D + 1.0Ev + 1.0Eh 330°	1.2D + 1.0Ev + 1.0Eh 330° - Seismic
0.9D - 1.0Ev + 1.0Eh Normal	0.9D - 1.0Ev + 1.0Eh Normal - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 60°	0.9D - 1.0Ev + 1.0Eh 60° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 90°	0.9D - 1.0Ev + 1.0Eh 90° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 120°	0.9D - 1.0Ev + 1.0Eh 120° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 180°	0.9D - 1.0Ev + 1.0Eh 180° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 210°	0.9D - 1.0Ev + 1.0Eh 210° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 240°	0.9D - 1.0Ev + 1.0Eh 240° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 300°	0.9D - 1.0Ev + 1.0Eh 300° - Seismic (Reduced DL)
0.9D - 1.0Ev + 1.0Eh 330°	0.9D - 1.0Ev + 1.0Eh 330° - Seismic (Reduced DL)
1.0D + 1.0W Service Normal	1.0D + 1.0W Service Normal - 60 mph Wind with No Ice
1.0D + 1.0W Service 60°	1.0D + 1.0W Service 60° - 60 mph Wind with No Ice
1.0D + 1.0W Service 90°	1.0D + 1.0W Service 90° - 60 mph Wind with No Ice
1.0D + 1.0W Service 120°	1.0D + 1.0W Service 120° - 60 mph Wind with No Ice
1.0D + 1.0W Service 180°	1.0D + 1.0W Service 180° - 60 mph Wind with No Ice
1.0D + 1.0W Service 210°	1.0D + 1.0W Service 210° - 60 mph Wind with No Ice
1.0D + 1.0W Service 240°	1.0D + 1.0W Service 240° - 60 mph Wind with No Ice
1.0D + 1.0W Service 300°	1.0D + 1.0W Service 300° - 60 mph Wind with No Ice
1.0D + 1.0W Service 330°	1.0D + 1.0W Service 330° - 60 mph Wind with No Ice
1.2D + 1.0Ev + 1.5Eh Normal	1.2D + 1.0Ev + 1.5Eh Normal - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 60°	1.2D + 1.0Ev + 1.5Eh 60° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 90°	1.2D + 1.0Ev + 1.5Eh 90° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 120°	1.2D + 1.0Ev + 1.5Eh 120° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 180°	1.2D + 1.0Ev + 1.5Eh 180° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 210°	1.2D + 1.0Ev + 1.5Eh 210° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 240°	1.2D + 1.0Ev + 1.5Eh 240° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 300°	1.2D + 1.0Ev + 1.5Eh 300° - Seismic Overstrength
1.2D + 1.0Ev + 1.5Eh 330°	1.2D + 1.0Ev + 1.5Eh 330° - Seismic Overstrength
0.9D - 1.0Ev + 1.5Eh Normal	0.9D - 1.0Ev + 1.5Eh Normal - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 60°	0.9D - 1.0Ev + 1.5Eh 60° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 90°	0.9D - 1.0Ev + 1.5Eh 90° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 120°	0.9D - 1.0Ev + 1.5Eh 120° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 180°	0.9D - 1.0Ev + 1.5Eh 180° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 210°	0.9D - 1.0Ev + 1.5Eh 210° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 240°	0.9D - 1.0Ev + 1.5Eh 240° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 300°	0.9D - 1.0Ev + 1.5Eh 300° - Seismic Overstrength (Reduced DL)
0.9D - 1.0Ev + 1.5Eh 330°	0.9D - 1.0Ev + 1.5Eh 330° - Seismic Overstrength (Reduced DL)

TOWER LOADING – DISCRETE APPURTENANCE

Discrete Appurtenance Properties for LC: **1.2D + 1.0W**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
253.0	Ericsson RRUS 4490	3	68	2.7	1.7	15.7	7.0	0.75	0.67	0.0	0.00	46.50	161	246
253.0	Ericsson AIR 6419 B77D/C-Band	3	71	3.8	2.4	16.1	8.0	0.75	0.65	0.0	0.00	46.50	219	256
253.0	Raycap RxxDC-6627-PF-48	1	32	4.1	2.5	16.5	12.6	0.75	1.00	0.0	0.00	46.50	120	38
253.0	Ericsson AIR 3283 B25 B66	3	108	7.9	3.9	20.0	10.9	0.75	0.67	0.0	0.00	46.50	469	389
253.0	Commscope NHH-65C-R2B	6	52	11.4	8.0	11.9	7.1	0.80	0.70	3.0	4,548.37	46.61	1516	372
253.0	Unused Reserve (17489.70 sqin)	1	1416	121.5	0.0	0.0	0.0	0.75	0.90	0.0	0.00	46.50	3240	1699
250.0	Generic Flat Low Profile Platf	1	1875	26.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	46.39	1029	2250
240.0	Ceragon FibeAir IP-20D-HP	1	27	1.2	1.0	11.3	4.2	0.80	1.00	0.0	0.00	46.00	37	32
240.0	Ericsson Radio 4460 B25+B66	4	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	46.00	160	523
240.0	Ericsson Radio 4480 B71+B85A	4	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	46.00	178	403
240.0	Ericsson AIR 6419 B41	4	69	5.6	2.8	20.0	6.3	0.80	0.63	0.0	0.00	46.00	441	329
240.0	Commscope VHLP3-11WA	1	38	8.9	3.0	36.0	15.2	0.80	1.00	0.0	0.00	46.00	279	45
240.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	1.00	1.00	0.0	0.00	46.00	2100	1440
240.0	Commscope FFVV-65C-R3-V1	4	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	46.00	1664	598
	Totals	**39**	**7,183**	**455.3**									11,615	8,620

Discrete Appurtenance Properties for LC: **0.9D + 1.0W**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
253.0	Ericsson RRUS 4490	3	68	2.7	1.7	15.7	7.0	0.75	0.67	0.0	0.00	46.50	161	185
253.0	Ericsson AIR 6419 B77D/C-Band	3	71	3.8	2.4	16.1	8.0	0.75	0.65	0.0	0.00	46.50	219	192
253.0	Raycap RxxDC-6627-PF-48	1	32	4.1	2.5	16.5	12.6	0.75	1.00	0.0	0.00	46.50	120	29
253.0	Ericsson AIR 3283 B25 B66	3	108	7.9	3.9	20.0	10.9	0.75	0.67	0.0	0.00	46.50	469	292
253.0	Commscope NHH-65C-R2B	6	52	11.4	8.0	11.9	7.1	0.80	0.70	3.0	4,548.37	46.61	1516	279
253.0	Unused Reserve (17489.70 sqin)	1	1416	121.5	0.0	0.0	0.0	0.75	0.90	0.0	0.00	46.50	3240	1275
250.0	Generic Flat Low Profile Platf	1	1875	26.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	46.39	1029	1688
240.0	Ceragon FibeAir IP-20D-HP	1	27	1.2	1.0	11.3	4.2	0.80	1.00	0.0	0.00	46.00	37	24
240.0	Ericsson Radio 4460 B25+B66	4	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	46.00	160	392
240.0	Ericsson Radio 4480 B71+B85A	4	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	46.00	178	302
240.0	Ericsson AIR 6419 B41	4	69	5.6	2.8	20.0	6.3	0.80	0.63	0.0	0.00	46.00	441	247
240.0	Commscope VHLP3-11WA	1	38	8.9	3.0	36.0	15.2	0.80	1.00	0.0	0.00	46.00	279	34
240.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	1.00	1.00	0.0	0.00	46.00	2100	1080
240.0	Commscope FFVV-65C-R3-V1	4	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	46.00	1664	449
	Totals	**39**	**7,183**	**455.3**									11,615	6,465

Discrete Appurtenance Properties for LC: **1.2D + 1.0Di + 1.0Wi**

Elev (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
253.0	Ericsson RRUS 4490	3	68	2.7	1.7	15.7	7.0	0.75	0.67	0.0	0.00	2.96	10	246
253.0	Ericsson AIR 6419 B77D/C-Band	3	71	3.8	2.4	16.1	8.0	0.75	0.65	0.0	0.00	2.96	14	256
253.0	Raycap RxxDC-6627-PF-48	1	32	4.1	2.5	16.5	12.6	0.75	1.00	0.0	0.00	2.96	8	38
253.0	Ericsson AIR 3283 B25 B66	3	108	7.9	3.9	20.0	10.9	0.75	0.67	0.0	0.00	2.96	30	389
253.0	Commscope NHH-65C-R2B	6	52	11.4	8.0	11.9	7.1	0.80	0.70	3.0	289.07	2.96	96	372
253.0	Unused Reserve (17489.70 sqin)	1	1416	121.5	0.0	0.0	0.0	0.75	0.90	0.0	0.00	2.96	206	1699
250.0	Generic Flat Low Profile Platf	1	1875	26.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	2.95	65	2250
240.0	Ceragon FibeAir IP-20D-HP	1	26	1.2	1.0	11.3	4.2	0.80	1.00	0.0	0.00	2.92	2	32
240.0	Ericsson Radio 4460 B25+B66	4	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	2.92	10	523
240.0	Ericsson Radio 4480 B71+B85A	4	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	2.92	11	403
240.0	Ericsson AIR 6419 B41	4	68	5.6	2.8	20.0	6.3	0.80	0.63	0.0	0.00	2.92	28	329
240.0	Commscope VHLP3-11WA	1	38	8.9	3.0	36.0	15.2	0.80	1.00	0.0	0.00	2.92	18	45
240.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	1.00	1.00	0.0	0.00	2.92	133	1440
240.0	Commscope FFVV-65C-R3-V1	4	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	2.92	106	598
	Totals	**39**	**7,183**	**455.3**									738	8,620

Discrete Appurtenance Properties for LC: **1.0D + 1.0W Service**

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
253.0	Ericsson RRUS 4490	3	68	2.7	1.7	15.7	7.0	0.75	0.67	0.0	0.00	11.82	41	205
253.0	Ericsson AIR 6419 B77D/C-Band	3	71	3.8	2.4	16.1	8.0	0.75	0.65	0.0	0.00	11.82	56	213
253.0	Raycap RxxDC-6627-PF-48	1	32	4.1	2.5	16.5	12.6	0.75	1.00	0.0	0.00	11.82	31	32
253.0	Ericsson AIR 3283 B25 B66	3	108	7.9	3.9	20.0	10.9	0.75	0.67	0.0	0.00	11.82	119	324
253.0	Commscope NHH-65C-R2B	6	52	11.4	8.0	11.9	7.1	0.80	0.70	3.0	1,156.28	11.85	385	310
253.0	Unused Reserve (17489.70 sqin)	1	1416	121.5	0.0	0.0	0.0	0.75	0.90	0.0	0.00	11.82	824	1416
250.0	Generic Flat Low Profile Platf	1	1875	26.1	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.79	262	1875
240.0	Ceragon FibeAir IP-20D-HP	1	27	1.2	1.0	11.3	4.2	0.80	1.00	0.0	0.00	11.69	9	26
240.0	Ericsson Radio 4460 B25+B66	4	109	2.6	1.6	15.7	12.1	0.80	0.50	0.0	0.00	11.69	41	436
240.0	Ericsson Radio 4480 B71+B85A	4	84	2.9	1.8	15.7	7.5	0.80	0.50	0.0	0.00	11.69	45	336
240.0	Ericsson AIR 6419 B41	4	69	5.6	2.8	20.0	6.3	0.80	0.63	0.0	0.00	11.69	112	274
240.0	Commscope VHLP3-11WA	1	38	8.9	3.0	36.0	15.2	0.80	1.00	0.0	0.00	11.69	71	38
240.0	Generic Flat Light Sector Fram	3	400	17.9	0.0	0.0	0.0	1.00	1.00	0.0	0.00	11.69	534	1200
240.0	Commscope FFVV-65C-R3-V1	4	125	21.1	8.0	25.2	9.3	0.80	0.63	0.0	0.00	11.69	423	498

Elev (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K_a	Orient. Factor	Vert. Ecc. (ft)	M_u (lb-ft)	Q_z (psf)	F_a (WL) (lb)	P_a (DL) (lb)
	Totals	**39**	**7,183**	**455.3**									2,953	7,183

TOWER LOADING – LINEAR APPURTENANCE

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	% In Wind	Spread On Faces	Bundling	Cluster Dia (in)	Out of Zone	Spacing (in)	Orient. Factor	K_a Override
0.0	253.0	1.43"(36.4mm) Hybrid	2	1.43	0.79	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	253.0	1 5/8" Coax	15	1.98	0.82	35	1	Block	0.00	N	1.00	1.00	0.00
0.0	250.0	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.0	250.0	Climbing Ladder	1	2.00	6.90	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	240.0	1.99" (50.7mm) Hybrid	4	1.99	1.90	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	240.0	2.17" (55mm) Hybrid	1	2.17	3.15	100	2	Individual	0.00	N	1.00	1.00	0.00
0.0	240.0	1/4" Coax	1	0.34	0.06	100	2	Individual	0.00	N	1.00	1.00	0.00

SECTION FORCES

1.2D + 1.0W Normal — Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	951	0	804	722	1526
12	230	45.60	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2994	0	1666	1912	3578
11	210	44.76	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.09	44.92	0.00	3267	0	1709	1876	3586
10	190	43.86	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.45	48.16	0.00	3879	0	1795	1839	3634
9	170	42.88	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.10	63.48	0.00	4522	0	2314	1797	4111
8	150	41.79	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.00	72.40	0.00	5038	0	2572	1752	4324
7	130	40.59	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	33.45	91.90	0.00	5831	0	3171	1702	4872
6	110	39.23	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	30.45	86.75	0.00	6484	0	2893	1644	4537
5	90	37.66	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	37.51	105.63	0.00	7445	0	3381	1579	4959
4	70	35.77	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	40.72	115.21	0.00	8124	0	3503	1500	5003
3	50	33.40	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	49.06	137.32	0.00	8698	0	3898	1400	5298
2	30	30.09	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	52.93	148.60	0.00	9436	0	3801	1261	5063
1	10	26.09	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	55.02	155.14	0.00	11364	0	3440	1094	4534
													Totals	**78,032**	**0**			**55,024**

1.2D + 1.0W 60° — Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	951	0	678	722	1399
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2994	0	1428	1912	3339
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.79	38.88	0.00	3267	0	1479	1876	3356
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.19	41.92	0.00	3879	0	1563	1839	3401
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	19.78	54.34	0.00	4522	0	1980	1797	3777
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	22.15	61.66	0.00	5038	0	2190	1752	3942
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	28.17	77.39	0.00	5831	0	2670	1702	4372
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	25.80	73.51	0.00	6484	0	2451	1644	4096
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	31.52	88.75	0.00	7445	0	2841	1579	4419
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	34.15	96.61	0.00	8124	0	2938	1500	4437
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	40.87	114.39	0.00	8698	0	3248	1400	4648
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	44.06	123.70	0.00	9436	0	3164	1261	4426
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	45.48	128.25	0.00	11364	0	2844	1094	3938
													Totals	**78,032**	**0**			**49,550**

1.2D + 1.0W 90° — Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	951	0	709	722	1431
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2994	0	1487	1912	3399
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.36	40.39	0.00	3267	0	1537	1876	3413
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	15.76	43.48	0.00	3879	0	1621	1839	3459
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	20.61	56.62	0.00	4522	0	2064	1797	3861
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.11	64.34	0.00	5038	0	2286	1752	4038
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	29.49	81.02	0.00	5831	0	2795	1702	4497
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	26.97	76.82	0.00	6484	0	2561	1644	4206
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	33.01	92.97	0.00	7445	0	2976	1579	4554
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	35.79	101.26	0.00	8124	0	3079	1500	4579
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	42.91	120.12	0.00	8698	0	3410	1400	4810
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	46.28	129.93	0.00	9436	0	3323	1261	4585
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	47.87	134.99	0.00	11364	0	2993	1094	4087
													Totals	**78,032**	**0**			**50,919**

1.2D + 1.0W 120° — Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice — Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	951	0	804	722	1526
12	230	45.60	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2994	0	1666	1912	3578
11	210	44.76	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.09	44.92	0.00	3267	0	1709	1876	3586
10	190	43.86	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.45	48.16	0.00	3879	0	1795	1839	3634
9	170	42.88	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.10	63.48	0.00	4522	0	2314	1797	4111
8	150	41.79	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.00	72.40	0.00	5038	0	2572	1752	4324
7	130	40.59	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	33.45	91.90	0.00	5831	0	3171	1702	4872
6	110	39.23	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	30.45	86.75	0.00	6484	0	2893	1644	4537
5	90	37.66	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	37.51	105.63	0.00	7445	0	3381	1579	4959
4	70	35.77	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	40.72	115.21	0.00	8124	0	3503	1500	5003
3	50	33.40	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	49.06	137.32	0.00	8698	0	3898	1400	5298
2	30	30.09	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	52.93	148.60	0.00	9436	0	3801	1261	5063
1	10	26.09	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	55.04	155.21	0.00	11364	0	3442	1094	4535
													Totals	**78,032**	**0**			**55,026**

SECTION FORCES

1.2D + 1.0W 180° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	951	0	678	722	1399
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2994	0	1428	1912	3339
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.79	38.88	0.00	3267	0	1479	1876	3356
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.19	41.92	0.00	3879	0	1563	1839	3401
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	19.78	54.34	0.00	4522	0	1980	1797	3777
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	22.15	61.66	0.00	5038	0	2190	1752	3942
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	28.17	77.39	0.00	5831	0	2670	1702	4372
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	25.80	73.51	0.00	6484	0	2451	1644	4096
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	31.52	88.75	0.00	7445	0	2841	1579	4419
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	34.15	96.61	0.00	8124	0	2938	1500	4437
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	40.87	114.39	0.00	8698	0	3248	1400	4648
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	44.06	123.70	0.00	9436	0	3164	1261	4426
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	45.48	128.25	0.00	11364	0	2844	1094	3938
													Totals	**78,032**	**0**			**49,550**

1.2D + 1.0W 210° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	951	0	709	722	1431
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2994	0	1487	1912	3399
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.36	40.39	0.00	3267	0	1537	1876	3413
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	15.76	43.48	0.00	3879	0	1621	1839	3459
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	20.61	56.62	0.00	4522	0	2064	1797	3861
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.11	64.34	0.00	5038	0	2286	1752	4038
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	29.49	81.02	0.00	5831	0	2795	1702	4497
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	26.97	76.82	0.00	6484	0	2561	1644	4206
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	33.01	92.97	0.00	7445	0	2976	1579	4554
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	35.79	101.26	0.00	8124	0	3079	1500	4579
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	42.91	120.12	0.00	8698	0	3410	1400	4810
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	46.28	129.93	0.00	9436	0	3323	1261	4585
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	47.87	134.99	0.00	11364	0	2993	1094	4087
													Totals	**78,032**	**0**			**50,919**

1.2D + 1.0W 240° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	951	0	804	722	1526
12	230	45.60	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2994	0	1666	1912	3578
11	210	44.76	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.09	44.92	0.00	3267	0	1709	1876	3586
10	190	43.86	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.45	48.16	0.00	3879	0	1795	1839	3634
9	170	42.88	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.10	63.48	0.00	4522	0	2314	1797	4111
8	150	41.79	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.00	72.40	0.00	5038	0	2572	1752	4324
7	130	40.59	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	33.45	91.90	0.00	5831	0	3171	1702	4872
6	110	39.23	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	30.45	86.75	0.00	6484	0	2893	1644	4537
5	90	37.66	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	37.51	105.63	0.00	7445	0	3381	1579	4959
4	70	35.77	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	40.72	115.21	0.00	8124	0	3503	1500	5003
3	50	33.40	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	49.06	137.32	0.00	8698	0	3898	1400	5298
2	30	30.09	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	52.93	148.60	0.00	9436	0	3801	1261	5063
1	10	26.09	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	55.04	155.21	0.00	11364	0	3442	1094	4535
													Totals	**78,032**	**0**			**55,026**

1.2D + 1.0W 300° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	951	0	678	722	1399
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2994	0	1428	1912	3339
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.79	38.88	0.00	3267	0	1479	1876	3356
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.19	41.92	0.00	3879	0	1563	1839	3401
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	19.78	54.34	0.00	4522	0	1980	1797	3777
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	22.15	61.66	0.00	5038	0	2190	1752	3942
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	28.17	77.39	0.00	5831	0	2670	1702	4372
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	25.80	73.51	0.00	6484	0	2451	1644	4096
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	31.52	88.75	0.00	7445	0	2841	1579	4419
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	34.15	96.61	0.00	8124	0	2938	1500	4437
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	40.87	114.39	0.00	8698	0	3248	1400	4648
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	44.06	123.70	0.00	9436	0	3164	1261	4426
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	45.48	128.25	0.00	11364	0	2844	1094	3938
													Totals	**78,032**	**0**			**49,550**

SECTION FORCES

1.2D + 1.0W 330° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	951	0	709	722	1431
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2994	0	1487	1912	3399
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.36	40.39	0.00	3267	0	1537	1876	3413
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	15.76	43.48	0.00	3879	0	1621	1839	3459
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	20.61	56.62	0.00	4522	0	2064	1797	3861
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.11	64.34	0.00	5038	0	2286	1752	4038
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	29.49	81.02	0.00	5831	0	2795	1702	4497
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	26.97	76.82	0.00	6484	0	2561	1644	4206
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	33.01	92.97	0.00	7445	0	2976	1579	4554
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	35.79	101.26	0.00	8124	0	3079	1500	4579
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	42.91	120.12	0.00	8698	0	3410	1400	4810
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	46.28	129.93	0.00	9436	0	3323	1261	4585
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	47.87	134.99	0.00	11364	0	2993	1094	4087
													Totals	**78,032**	**0**			**50,919**

0.9D + 1.0W Normal Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	713	0	804	722	1526
12	230	45.60	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2245	0	1666	1912	3578
11	210	44.76	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.09	44.92	0.00	2450	0	1709	1876	3586
10	190	43.86	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.45	48.16	0.00	2909	0	1795	1839	3634
9	170	42.88	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.10	63.48	0.00	3392	0	2314	1797	4111
8	150	41.79	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.00	72.40	0.00	3778	0	2572	1752	4324
7	130	40.59	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	33.45	91.90	0.00	4373	0	3171	1702	4872
6	110	39.23	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	30.45	86.75	0.00	4863	0	2893	1644	4537
5	90	37.66	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	37.51	105.63	0.00	5584	0	3381	1579	4959
4	70	35.77	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	40.72	115.21	0.00	6093	0	3503	1500	5003
3	50	33.40	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	49.06	137.32	0.00	6523	0	3898	1400	5298
2	30	30.09	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	52.93	148.60	0.00	7077	0	3801	1261	5063
1	10	26.09	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	55.04	155.21	0.00	8523	0	3442	1094	4535
													Totals	**58,524**	**0**			**55,026**

0.9D + 1.0W 60° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	713	0	678	722	1399
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2245	0	1428	1912	3339
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.79	38.88	0.00	2450	0	1479	1876	3356
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.19	41.92	0.00	2909	0	1563	1839	3401
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	19.78	54.34	0.00	3392	0	1980	1797	3777
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	22.15	61.66	0.00	3778	0	2190	1752	3942
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	28.17	77.39	0.00	4373	0	2670	1702	4372
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	25.80	73.51	0.00	4863	0	2451	1644	4096
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	31.52	88.75	0.00	5584	0	2841	1579	4419
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	34.15	96.61	0.00	6093	0	2938	1500	4437
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	40.87	114.39	0.00	6523	0	3248	1400	4648
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	44.06	123.70	0.00	7077	0	3164	1261	4426
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	45.48	128.25	0.00	8523	0	2844	1094	3938
													Totals	**58,524**	**0**			**49,550**

0.9D + 1.0W 90° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	713	0	709	722	1431
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2245	0	1487	1912	3399
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.36	40.39	0.00	2450	0	1537	1876	3413
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	15.76	43.48	0.00	2909	0	1621	1839	3459
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	20.61	56.62	0.00	3392	0	2064	1797	3861
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.11	64.34	0.00	3778	0	2286	1752	4038
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	29.49	81.02	0.00	4373	0	2795	1702	4497
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	26.97	76.82	0.00	4863	0	2561	1644	4206
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	33.01	92.97	0.00	5584	0	2976	1579	4554
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	35.79	101.26	0.00	6093	0	3079	1500	4579
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	42.91	120.12	0.00	6523	0	3410	1400	4810
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	46.28	129.93	0.00	7077	0	3323	1261	4585
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	47.87	134.99	0.00	8523	0	2993	1094	4087
													Totals	**58,524**	**0**			**50,919**

SECTION FORCES

0.9D + 1.0W 120° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	713	0	804	722	1526
12	230	45.60	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2245	0	1666	1912	3578
11	210	44.76	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.09	44.92	0.00	2450	0	1709	1876	3586
10	190	43.86	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.45	48.16	0.00	2909	0	1795	1839	3634
9	170	42.88	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.10	63.48	0.00	3392	0	2314	1797	4111
8	150	41.79	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.00	72.40	0.00	3778	0	2572	1752	4324
7	130	40.59	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	33.45	91.90	0.00	4373	0	3171	1702	4872
6	110	39.23	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	30.45	86.75	0.00	4863	0	2893	1644	4537
5	90	37.66	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	37.51	105.63	0.00	5584	0	3381	1579	4959
4	70	35.77	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	40.72	115.21	0.00	6093	0	3503	1500	5003
3	50	33.40	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	49.06	137.32	0.00	6523	0	3898	1400	5298
2	30	30.09	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	52.93	148.60	0.00	7077	0	3801	1261	5063
1	10	26.09	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	55.04	155.21	0.00	8523	0	3442	1094	4535
													Totals	**58,524**	**0**			**55,026**

0.9D + 1.0W 180° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	713	0	678	722	1399
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2245	0	1428	1912	3339
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.79	38.88	0.00	2450	0	1479	1876	3356
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.19	41.92	0.00	2909	0	1563	1839	3401
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	19.78	54.34	0.00	3392	0	1980	1797	3777
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	22.15	61.66	0.00	3778	0	2190	1752	3942
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	28.17	77.39	0.00	4373	0	2670	1702	4372
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	25.80	73.51	0.00	4863	0	2451	1644	4096
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	31.52	88.75	0.00	5584	0	2841	1579	4419
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	34.15	96.61	0.00	6093	0	2938	1500	4437
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	40.87	114.39	0.00	6523	0	3248	1400	4648
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	44.06	123.70	0.00	7077	0	3164	1261	4426
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	45.48	128.25	0.00	8523	0	2844	1094	3938
													Totals	**58,524**	**0**			**49,550**

0.9D + 1.0W 210° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	713	0	709	722	1431
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2245	0	1487	1912	3399
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.36	40.39	0.00	2450	0	1537	1876	3413
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	15.76	43.48	0.00	2909	0	1621	1839	3459
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	20.61	56.62	0.00	3392	0	2064	1797	3861
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.11	64.34	0.00	3778	0	2286	1752	4038
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	29.49	81.02	0.00	4373	0	2795	1702	4497
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	26.97	76.82	0.00	4863	0	2561	1644	4206
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	33.01	92.97	0.00	5584	0	2976	1579	4554
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	35.79	101.26	0.00	6093	0	3079	1500	4579
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	42.91	120.12	0.00	6523	0	3410	1400	4810
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	46.28	129.93	0.00	7077	0	3323	1261	4585
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	47.87	134.99	0.00	8523	0	2993	1094	4087
													Totals	**58,524**	**0**			**50,919**

0.9D + 1.0W 240° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	713	0	804	722	1526
12	230	45.60	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2245	0	1666	1912	3578
11	210	44.76	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.09	44.92	0.00	2450	0	1709	1876	3586
10	190	43.86	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.45	48.16	0.00	2909	0	1795	1839	3634
9	170	42.88	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.10	63.48	0.00	3392	0	2314	1797	4111
8	150	41.79	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.00	72.40	0.00	3778	0	2572	1752	4324
7	130	40.59	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	33.45	91.90	0.00	4373	0	3171	1702	4872
6	110	39.23	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	30.45	86.75	0.00	4863	0	2893	1644	4537
5	90	37.66	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	37.51	105.63	0.00	5584	0	3381	1579	4959
4	70	35.77	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	40.72	115.21	0.00	6093	0	3503	1500	5003
3	50	33.40	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	49.06	137.32	0.00	6523	0	3898	1400	5298
2	30	30.09	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	52.93	148.60	0.00	7077	0	3801	1261	5063
1	10	26.09	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	55.04	155.21	0.00	8523	0	3442	1094	4535
													Totals	**58,524**	**0**			**55,026**

SECTION FORCES

0.9D + 1.0W 300° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	713	0	678	722	1399
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2245	0	1428	1912	3339
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.79	38.88	0.00	2450	0	1479	1876	3356
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.19	41.92	0.00	2909	0	1563	1839	3401
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	19.78	54.34	0.00	3392	0	1980	1797	3777
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	22.15	61.66	0.00	3778	0	2190	1752	3942
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	28.17	77.39	0.00	4373	0	2670	1702	4372
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	25.80	73.51	0.00	4863	0	2451	1644	4096
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	31.52	88.75	0.00	5584	0	2841	1579	4419
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	34.15	96.61	0.00	6093	0	2938	1500	4437
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	40.87	114.39	0.00	6523	0	3248	1400	4648
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	44.06	123.70	0.00	7077	0	3164	1261	4426
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	45.48	128.25	0.00	8523	0	2844	1094	3938
													Totals	**58,524**	**0**			**49,550**

0.9D + 1.0W 330° Gust Response Factor (Gh): 0.85
119 mph Wind with No Ice (Reduced DL) Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	46.20	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	713	0	709	722	1431
12	230	45.60	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2245	0	1487	1912	3399
11	210	44.76	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.36	40.39	0.00	2450	0	1537	1876	3413
10	190	43.86	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	15.76	43.48	0.00	2909	0	1621	1839	3459
9	170	42.88	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	20.61	56.62	0.00	3392	0	2064	1797	3861
8	150	41.79	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.11	64.34	0.00	3778	0	2286	1752	4038
7	130	40.59	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	29.49	81.02	0.00	4373	0	2795	1702	4497
6	110	39.23	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	26.97	76.82	0.00	4863	0	2561	1644	4206
5	90	37.66	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	33.01	92.97	0.00	5584	0	2976	1579	4554
4	70	35.77	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	35.79	101.26	0.00	6093	0	3079	1500	4579
3	50	33.40	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	42.91	120.12	0.00	6523	0	3410	1400	4810
2	30	30.09	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	46.28	129.93	0.00	7077	0	3323	1261	4585
1	10	26.09	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	47.87	134.99	0.00	8523	0	2993	1094	4087
													Totals	**58,524**	**0**			**50,919**

1.2D + 1.0Di + 1.0Wi Normal Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	951	0	51	47	98
12	230	2.90	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2994	0	106	134	239
11	210	2.84	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.24	45.31	0.00	3267	0	110	133	242
10	190	2.79	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.94	49.50	0.00	3879	0	117	132	250
9	170	2.72	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.76	65.27	0.00	4522	0	151	129	280
8	150	2.66	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.86	74.77	0.00	5038	0	169	127	295
7	130	2.58	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	34.47	94.69	0.00	5831	0	208	122	330
6	110	2.49	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	31.74	90.41	0.00	6484	0	192	120	311
5	90	2.39	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	38.95	109.67	0.00	7445	0	223	115	338
4	70	2.27	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	42.32	119.72	0.00	8124	0	231	109	340
3	50	2.12	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	50.41	141.11	0.00	8698	0	255	101	356
2	30	1.91	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	54.27	152.36	0.00	9436	0	248	91	339
1	10	1.66	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	57.72	162.76	0.00	11364	0	229	79	309
													Totals	**78,032**	**0**			**3,729**

1.2D + 1.0Di + 1.0Wi 60° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	951	0	43	47	90
12	230	2.90	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2994	0	91	134	224
11	210	2.84	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.94	39.26	0.00	3267	0	95	133	228
10	190	2.79	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.68	43.26	0.00	3879	0	102	132	235
9	170	2.72	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	20.43	56.13	0.00	4522	0	130	129	259
8	150	2.66	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	23.00	64.04	0.00	5038	0	145	127	271
7	130	2.58	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	29.19	80.18	0.00	5831	0	176	122	298
6	110	2.49	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	27.09	77.17	0.00	6484	0	164	120	283
5	90	2.39	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	32.95	92.80	0.00	7445	0	189	115	303
4	70	2.27	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	35.74	101.13	0.00	8124	0	195	109	304
3	50	2.12	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	42.22	118.18	0.00	8698	0	213	101	315
2	30	1.91	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	45.40	127.46	0.00	9436	0	207	91	299
1	10	1.66	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	48.16	135.81	0.00	11364	0	191	79	271
													Totals	**78,032**	**0**			**3,381**

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 90° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	951	0	45	47	92
12	230	2.90	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2994	0	95	134	228
11	210	2.84	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.51	40.78	0.00	3267	0	99	133	231
10	190	2.79	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	16.24	44.82	0.00	3879	0	106	132	239
9	170	2.72	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	21.26	58.41	0.00	4522	0	135	129	265
8	150	2.66	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.96	66.72	0.00	5038	0	151	127	277
7	130	2.58	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	30.51	83.81	0.00	5831	0	184	122	306
6	110	2.49	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	28.25	80.48	0.00	6484	0	171	120	290
5	90	2.39	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	34.45	97.01	0.00	7445	0	197	115	312
4	70	2.27	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	37.39	105.78	0.00	8124	0	204	109	313
3	50	2.12	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	44.27	123.91	0.00	8698	0	224	101	325
2	30	1.91	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	47.62	133.69	0.00	9436	0	217	91	309
1	10	1.66	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	50.55	142.54	0.00	11364	0	201	79	280
													Totals	**78,032**	**0**			**3,468**

1.2D + 1.0Di + 1.0Wi 120° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	951	0	51	47	98
12	230	2.90	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2994	0	106	134	239
11	210	2.84	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.24	45.31	0.00	3267	0	110	133	242
10	190	2.79	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.94	49.50	0.00	3879	0	117	132	250
9	170	2.72	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.76	65.27	0.00	4522	0	151	129	280
8	150	2.66	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.86	74.77	0.00	5038	0	169	127	295
7	130	2.58	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	34.47	94.69	0.00	5831	0	208	122	330
6	110	2.49	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	31.74	90.41	0.00	6484	0	192	120	311
5	90	2.39	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	38.95	109.67	0.00	7445	0	223	115	338
4	70	2.27	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	42.32	119.72	0.00	8124	0	231	109	340
3	50	2.12	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	50.41	141.11	0.00	8698	0	255	101	356
2	30	1.91	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	54.27	152.36	0.00	9436	0	248	91	339
1	10	1.66	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	57.72	162.76	0.00	11364	0	229	79	309
													Totals	**78,032**	**0**			**3,729**

1.2D + 1.0Di + 1.0Wi 180° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	951	0	43	47	90
12	230	2.90	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2994	0	91	134	224
11	210	2.84	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.94	39.26	0.00	3267	0	95	133	228
10	190	2.79	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.68	43.26	0.00	3879	0	102	132	235
9	170	2.72	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	20.43	56.13	0.00	4522	0	130	129	259
8	150	2.66	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	23.00	64.04	0.00	5038	0	145	127	271
7	130	2.58	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	29.19	80.18	0.00	5831	0	176	122	298
6	110	2.49	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	27.09	77.17	0.00	6484	0	164	120	283
5	90	2.39	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	32.95	92.80	0.00	7445	0	189	115	303
4	70	2.27	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	35.74	101.13	0.00	8124	0	195	109	304
3	50	2.12	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	42.22	118.18	0.00	8698	0	213	101	315
2	30	1.91	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	45.40	127.46	0.00	9436	0	207	91	299
1	10	1.66	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	48.16	135.81	0.00	11364	0	191	79	271
													Totals	**78,032**	**0**			**3,381**

1.2D + 1.0Di + 1.0Wi 210° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	951	0	45	47	92
12	230	2.90	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2994	0	95	134	228
11	210	2.84	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.51	40.78	0.00	3267	0	99	133	231
10	190	2.79	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	16.24	44.82	0.00	3879	0	106	132	239
9	170	2.72	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	21.26	58.41	0.00	4522	0	135	129	265
8	150	2.66	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.96	66.72	0.00	5038	0	151	127	277
7	130	2.58	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	30.51	83.81	0.00	5831	0	184	122	306
6	110	2.49	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	28.25	80.48	0.00	6484	0	171	120	290
5	90	2.39	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	34.45	97.01	0.00	7445	0	197	115	312
4	70	2.27	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	37.39	105.78	0.00	8124	0	204	109	313
3	50	2.12	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	44.27	123.91	0.00	8698	0	224	101	325
2	30	1.91	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	47.62	133.69	0.00	9436	0	217	91	309
1	10	1.66	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	50.55	142.54	0.00	11364	0	201	79	280
													Totals	**78,032**	**0**			**3,468**

SECTION FORCES

1.2D + 1.0Di + 1.0Wi 240° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	951	0	51	47	98
12	230	2.90	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2994	0	106	134	239
11	210	2.84	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.24	45.31	0.00	3267	0	110	133	242
10	190	2.79	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.94	49.50	0.00	3879	0	117	132	250
9	170	2.72	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.76	65.27	0.00	4522	0	151	129	280
8	150	2.66	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.86	74.77	0.00	5038	0	169	127	295
7	130	2.58	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	34.47	94.69	0.00	5831	0	208	122	330
6	110	2.49	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	31.74	90.41	0.00	6484	0	192	120	311
5	90	2.39	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	38.95	109.67	0.00	7445	0	223	115	338
4	70	2.27	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	42.32	119.72	0.00	8124	0	231	109	340
3	50	2.12	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	50.41	141.11	0.00	8698	0	255	101	356
2	30	1.91	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	54.27	152.36	0.00	9436	0	248	91	339
1	10	1.66	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	57.72	162.76	0.00	11364	0	229	79	309
													Totals	**78,032**	**0**			**3,729**

1.2D + 1.0Di + 1.0Wi 300° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	951	0	43	47	90
12	230	2.90	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2994	0	91	134	224
11	210	2.84	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.94	39.26	0.00	3267	0	95	133	228
10	190	2.79	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.68	43.26	0.00	3879	0	102	132	235
9	170	2.72	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	20.43	56.13	0.00	4522	0	130	129	259
8	150	2.66	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	23.00	64.04	0.00	5038	0	145	127	271
7	130	2.58	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	29.19	80.18	0.00	5831	0	176	122	298
6	110	2.49	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	27.09	77.17	0.00	6484	0	164	120	283
5	90	2.39	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	32.95	92.80	0.00	7445	0	189	115	303
4	70	2.27	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	35.74	101.13	0.00	8124	0	195	109	304
3	50	2.12	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	42.22	118.18	0.00	8698	0	213	101	315
2	30	1.91	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	45.40	127.46	0.00	9436	0	207	91	299
1	10	1.66	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	48.16	135.81	0.00	11364	0	191	79	271
													Totals	**78,032**	**0**			**3,381**

1.2D + 1.0Di + 1.0Wi 330° Gust Response Factor (Gh): 0.85
30 mph Wind with 0" Radial Ice Wind Importance Factor (Iw): 1.00 Ice Dead Load Factor: 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	2.94	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	951	0	45	47	92
12	230	2.90	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2994	0	95	134	228
11	210	2.84	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.51	40.78	0.00	3267	0	99	133	231
10	190	2.79	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	16.24	44.82	0.00	3879	0	106	132	239
9	170	2.72	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	21.26	58.41	0.00	4522	0	135	129	265
8	150	2.66	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.96	66.72	0.00	5038	0	151	127	277
7	130	2.58	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	30.51	83.81	0.00	5831	0	184	122	306
6	110	2.49	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	28.25	80.48	0.00	6484	0	171	120	290
5	90	2.39	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	34.45	97.01	0.00	7445	0	197	115	312
4	70	2.27	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	37.39	105.78	0.00	8124	0	204	109	313
3	50	2.12	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	44.27	123.91	0.00	8698	0	224	101	325
2	30	1.91	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	47.62	133.69	0.00	9436	0	217	91	309
1	10	1.66	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	50.55	142.54	0.00	11364	0	201	79	280
													Totals	**78,032**	**0**			**3,468**

1.0D + 1.0W Service Normal Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_Z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	792	0	204	183	388
12	230	11.59	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2495	0	424	486	909
11	210	11.38	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.24	45.31	0.00	2722	0	438	477	915
10	190	11.15	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.94	49.50	0.00	3233	0	469	467	937
9	170	10.90	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.76	65.27	0.00	3769	0	605	457	1062
8	150	10.62	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.86	74.77	0.00	4198	0	675	445	1121
7	130	10.32	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	34.47	94.69	0.00	4859	0	831	433	1263
6	110	9.97	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	31.74	90.41	0.00	5403	0	766	418	1184
5	90	9.57	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	38.95	109.67	0.00	6204	0	892	401	1294
4	70	9.09	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	42.32	119.72	0.00	6770	0	925	381	1307
3	50	8.49	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	50.41	141.11	0.00	7248	0	1018	356	1374
2	30	7.65	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	54.27	152.36	0.00	7863	0	991	321	1311
1	10	6.63	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	57.71	162.73	0.00	9470	0	917	278	1195
													Totals	**65,027**	**0**			**14,261**

SECTION FORCES

1.0D + 1.0W Service 60° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	792	0	172	183	356
12	230	11.59	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2495	0	363	486	849
11	210	11.38	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.94	39.26	0.00	2722	0	380	477	857
10	190	11.15	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.68	43.26	0.00	3233	0	410	467	877
9	170	10.90	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	20.43	56.13	0.00	3769	0	520	457	977
8	150	10.62	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	23.00	64.04	0.00	4198	0	578	445	1024
7	130	10.32	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	29.19	80.18	0.00	4859	0	703	433	1136
6	110	9.97	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	27.09	77.17	0.00	5403	0	654	418	1072
5	90	9.57	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	32.95	92.80	0.00	6204	0	755	401	1156
4	70	9.09	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	35.74	101.13	0.00	6770	0	782	381	1163
3	50	8.49	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	42.22	118.18	0.00	7248	0	853	356	1209
2	30	7.65	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	45.40	127.46	0.00	7863	0	829	321	1150
1	10	6.63	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	48.15	135.77	0.00	9470	0	765	278	1043
													Totals	**65,027**	**0**			**12,869**

1.0D + 1.0W Service 90° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	792	0	180	183	364
12	230	11.59	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2495	0	378	486	864
11	210	11.38	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.51	40.78	0.00	2722	0	394	477	871
10	190	11.15	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	16.24	44.82	0.00	3233	0	425	467	892
9	170	10.90	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	21.26	58.41	0.00	3769	0	541	457	998
8	150	10.62	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.96	66.72	0.00	4198	0	603	445	1048
7	130	10.32	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	30.51	83.81	0.00	4859	0	735	433	1168
6	110	9.97	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	28.25	80.48	0.00	5403	0	682	418	1100
5	90	9.57	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	34.45	97.01	0.00	6204	0	789	401	1191
4	70	9.09	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	37.39	105.78	0.00	6770	0	818	381	1199
3	50	8.49	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	44.27	123.91	0.00	7248	0	894	356	1250
2	30	7.65	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	47.62	133.69	0.00	7863	0	869	321	1190
1	10	6.63	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	50.54	142.51	0.00	9470	0	803	278	1081
													Totals	**65,027**	**0**			**13,217**

1.0D + 1.0W Service 120° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	792	0	204	183	388
12	230	11.59	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2495	0	424	486	909
11	210	11.38	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.24	45.31	0.00	2722	0	438	477	915
10	190	11.15	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.94	49.50	0.00	3233	0	469	467	937
9	170	10.90	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.76	65.27	0.00	3769	0	605	457	1062
8	150	10.62	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.86	74.77	0.00	4198	0	675	445	1121
7	130	10.32	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	34.47	94.69	0.00	4859	0	831	433	1263
6	110	9.97	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	31.74	90.41	0.00	5403	0	766	418	1184
5	90	9.57	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	38.95	109.67	0.00	6204	0	892	401	1294
4	70	9.09	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	42.32	119.72	0.00	6770	0	925	381	1307
3	50	8.49	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	50.41	141.11	0.00	7248	0	1018	356	1374
2	30	7.65	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	54.27	152.36	0.00	7863	0	991	321	1311
1	10	6.63	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	57.71	162.73	0.00	9470	0	917	278	1195
													Totals	**65,027**	**0**			**14,261**

1.0D + 1.0W Service 180° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	792	0	172	183	356
12	230	11.59	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2495	0	363	486	849
11	210	11.38	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.94	39.26	0.00	2722	0	380	477	857
10	190	11.15	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.68	43.26	0.00	3233	0	410	467	877
9	170	10.90	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	20.43	56.13	0.00	3769	0	520	457	977
8	150	10.62	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	23.00	64.04	0.00	4198	0	578	445	1024
7	130	10.32	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	29.19	80.18	0.00	4859	0	703	433	1136
6	110	9.97	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	27.09	77.17	0.00	5403	0	654	418	1072
5	90	9.57	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	32.95	92.80	0.00	6204	0	755	401	1156
4	70	9.09	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	35.74	101.13	0.00	6770	0	782	381	1163
3	50	8.49	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	42.22	118.18	0.00	7248	0	853	356	1209
2	30	7.65	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	45.40	127.46	0.00	7863	0	829	321	1150
1	10	6.63	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	48.15	135.77	0.00	9470	0	765	278	1043
													Totals	**65,027**	**0**			**12,869**

SECTION FORCES

1.0D + 1.0W Service 210° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	792	0	180	183	364
12	230	11.59	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2495	0	378	486	864
11	210	11.38	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.51	40.78	0.00	2722	0	394	477	871
10	190	11.15	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	16.24	44.82	0.00	3233	0	425	467	892
9	170	10.90	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	21.26	58.41	0.00	3769	0	541	457	998
8	150	10.62	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.96	66.72	0.00	4198	0	603	445	1048
7	130	10.32	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	30.51	83.81	0.00	4859	0	735	433	1168
6	110	9.97	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	28.25	80.48	0.00	5403	0	682	418	1100
5	90	9.57	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	34.45	97.01	0.00	6204	0	789	401	1191
4	70	9.09	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	37.39	105.78	0.00	6770	0	818	381	1199
3	50	8.49	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	44.27	123.91	0.00	7248	0	894	356	1250
2	30	7.65	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	47.62	133.69	0.00	7863	0	869	321	1190
1	10	6.63	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	50.54	142.51	0.00	9470	0	803	278	1081
													Totals	**65,027**	**0**			**13,217**

1.0D + 1.0W Service 240° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	1.00	1.00	0.0	7.84	20.48	0.00	792	0	204	183	388
12	230	11.59	12.104	8.333	0.00	0.217	2.54	1.00	1.00	0.0	16.92	42.98	0.00	2495	0	424	486	909
11	210	11.38	11.501	10.014	0.00	0.190	2.63	1.00	1.00	0.0	17.24	45.31	0.00	2722	0	438	477	915
10	190	11.15	11.305	11.682	0.00	0.153	2.76	1.00	1.00	0.0	17.94	49.50	0.00	3233	0	469	467	937
9	170	10.90	16.644	12.517	0.00	0.156	2.75	1.00	1.00	0.0	23.76	65.27	0.00	3769	0	605	457	1062
8	150	10.62	19.283	13.351	0.00	0.146	2.78	1.00	1.00	0.0	26.86	74.77	0.00	4198	0	675	445	1121
7	130	10.32	26.406	14.186	0.00	0.157	2.75	1.00	1.00	0.0	34.47	94.69	0.00	4859	0	831	433	1263
6	110	9.97	23.241	15.020	0.00	0.130	2.85	1.00	1.00	0.0	31.74	90.41	0.00	5403	0	766	418	1184
5	90	9.57	29.965	15.855	0.00	0.138	2.82	1.00	1.00	0.0	38.95	109.67	0.00	6204	0	892	401	1294
4	70	9.09	32.868	16.689	0.00	0.134	2.83	1.00	1.00	0.0	42.32	119.72	0.00	6770	0	925	381	1307
3	50	8.49	40.951	16.689	0.00	0.142	2.80	1.00	1.00	0.0	50.41	141.11	0.00	7248	0	1018	356	1374
2	30	7.65	44.342	17.524	0.00	0.140	2.81	1.00	1.00	0.0	54.27	152.36	0.00	7863	0	991	321	1311
1	10	6.63	47.794	17.524	0.00	0.137	2.82	1.00	1.00	0.0	57.71	162.73	0.00	9470	0	917	278	1195
													Totals	**65,027**	**0**			**14,261**

1.0D + 1.0W Service 300° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	0.80	1.00	0.0	6.61	17.26	0.00	792	0	172	183	356
12	230	11.59	12.104	8.333	0.00	0.217	2.54	0.80	1.00	0.0	14.50	36.83	0.00	2495	0	363	486	849
11	210	11.38	11.501	10.014	0.00	0.190	2.63	0.80	1.00	0.0	14.94	39.26	0.00	2722	0	380	477	857
10	190	11.15	11.305	11.682	0.00	0.153	2.76	0.80	1.00	0.0	15.68	43.26	0.00	3233	0	410	467	877
9	170	10.90	16.644	12.517	0.00	0.156	2.75	0.80	1.00	0.0	20.43	56.13	0.00	3769	0	520	457	977
8	150	10.62	19.283	13.351	0.00	0.146	2.78	0.80	1.00	0.0	23.00	64.04	0.00	4198	0	578	445	1024
7	130	10.32	26.406	14.186	0.00	0.157	2.75	0.80	1.00	0.0	29.19	80.18	0.00	4859	0	703	433	1136
6	110	9.97	23.241	15.020	0.00	0.130	2.85	0.80	1.00	0.0	27.09	77.17	0.00	5403	0	654	418	1072
5	90	9.57	29.965	15.855	0.00	0.138	2.82	0.80	1.00	0.0	32.95	92.80	0.00	6204	0	755	401	1156
4	70	9.09	32.868	16.689	0.00	0.134	2.83	0.80	1.00	0.0	35.74	101.13	0.00	6770	0	782	381	1163
3	50	8.49	40.951	16.689	0.00	0.142	2.80	0.80	1.00	0.0	42.22	118.18	0.00	7248	0	853	356	1209
2	30	7.65	44.342	17.524	0.00	0.140	2.81	0.80	1.00	0.0	45.40	127.46	0.00	7863	0	829	321	1150
1	10	6.63	47.794	17.524	0.00	0.137	2.82	0.80	1.00	0.0	48.15	135.77	0.00	9470	0	765	278	1043
													Totals	**65,027**	**0**			**12,869**

1.0D + 1.0W Service 330° Gust Response Factor (Gh): 0.85
60 mph Wind with No Ice Wind Importance Factor (Iw): 1.00

Section #	Elev (ft)	Q_z (psf)	A_f (sf)	A_r (sf)	Ice A_r (sf)	e	C_f	D_f	D_r	T_{iz} (in)	A_e (sf)	EPA_a (sf)	EPA_{ai} (sf)	Wt (lb)	Ice Wt (lb)	F_{st} (lb)	F_a (lb)	Force (lb)
13	245	11.74	6.172	2.917	0.00	0.196	2.61	0.85	1.00	0.0	6.92	18.07	0.00	792	0	180	183	364
12	230	11.59	12.104	8.333	0.00	0.217	2.54	0.85	1.00	0.0	15.10	38.37	0.00	2495	0	378	486	864
11	210	11.38	11.501	10.014	0.00	0.190	2.63	0.85	1.00	0.0	15.51	40.78	0.00	2722	0	394	477	871
10	190	11.15	11.305	11.682	0.00	0.153	2.76	0.85	1.00	0.0	16.24	44.82	0.00	3233	0	425	467	892
9	170	10.90	16.644	12.517	0.00	0.156	2.75	0.85	1.00	0.0	21.26	58.41	0.00	3769	0	541	457	998
8	150	10.62	19.283	13.351	0.00	0.146	2.78	0.85	1.00	0.0	23.96	66.72	0.00	4198	0	603	445	1048
7	130	10.32	26.406	14.186	0.00	0.157	2.75	0.85	1.00	0.0	30.51	83.81	0.00	4859	0	735	433	1168
6	110	9.97	23.241	15.020	0.00	0.130	2.85	0.85	1.00	0.0	28.25	80.48	0.00	5403	0	682	418	1100
5	90	9.57	29.965	15.855	0.00	0.138	2.82	0.85	1.00	0.0	34.45	97.01	0.00	6204	0	789	401	1191
4	70	9.09	32.868	16.689	0.00	0.134	2.83	0.85	1.00	0.0	37.39	105.78	0.00	6770	0	818	381	1199
3	50	8.49	40.951	16.689	0.00	0.142	2.80	0.85	1.00	0.0	44.27	123.91	0.00	7248	0	894	356	1250
2	30	7.65	44.342	17.524	0.00	0.140	2.81	0.85	1.00	0.0	47.62	133.69	0.00	7863	0	869	321	1190
1	10	6.63	47.794	17.524	0.00	0.137	2.82	0.85	1.00	0.0	50.54	142.51	0.00	9470	0	803	278	1081
													Totals	**65,027**	**0**			**13,217**

EQUIVALENT LATERAL FORCE METHOD

Long-Period Transition Period (T_L – Seconds):	8
Importance Factor (I_e):	1.00
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.11
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.08
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_S:	0.03
Lower Limit C_S:	0.03
Period based on Rayleigh Method (sec):	1.15
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.32
Total Unfactored Dead Load:	72.21 k
Seismic Base Shear (E):	2.82 k

SEISMIC FORCES

0.9D - 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
13	245.00	792	1,152,991	0.028	80	696
12	230.00	2,495	3,338,997	0.083	233	2,190
11	210.00	2,722	3,230,163	0.080	225	2,390
10	190.00	3,233	3,359,692	0.083	234	2,838
9	170.00	3,769	3,380,505	0.084	236	3,309
8	150.00	4,198	3,190,701	0.079	222	3,686
7	130.00	4,859	3,055,840	0.076	213	4,266
6	110.00	5,403	2,723,805	0.067	190	4,744
5	90.00	6,204	2,397,778	0.059	167	5,447
4	70.00	6,770	1,876,049	0.046	131	5,944
3	50.00	7,248	1,286,545	0.032	90	6,364
2	30.00	7,863	709,743	0.018	49	6,904
1	10.00	9,470	199,620	0.005	14	8,315
Ericsson RRUS 4490	250.00	205	306,697	0.008	21	180
Ericsson AIR 6419 B77D/C-Band (71 lbs)	250.00	213	318,355	0.008	22	187
Raycap RxxDC-6627-PF-48	250.00	32	47,828	0.001	3	28
Ericsson AIR 3283 B25 B66	250.00	324	484,258	0.012	34	284
Commscope NHH-65C-R2B	250.00	310	462,735	0.011	32	272
Unused Reserve (17489.70 sqin)	250.00	1,416	2,116,684	0.052	147	1,243
Generic Flat Low Profile Platform	250.00	1,875	2,802,417	0.069	195	1,646
Ceragon FibeAir IP-20D-HP	240.00	26	37,524	0.001	3	23
Ericsson Radio 4460 B25+B66	240.00	436	617,373	0.015	43	383
Ericsson Radio 4480 B71+B85A	240.00	336	475,774	0.012	33	295
Ericsson AIR 6419 B41	240.00	274	387,982	0.010	27	241
Commscope VHLP3-11WA	240.00	38	53,100	0.001	4	33
Generic Flat Light Sector Frame	240.00	1,200	1,699,192	0.042	118	1,054
Commscope FFVV-65C-R3-V1	240.00	498	705,731	0.018	49	438
Totals		**72,210**	**40,418,078**	**1.000**	**2,816**	**63,401**

0.9D - 1.0Ev + 1.5Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
13	245.00	792	1,152,991	0.028	121	696
12	230.00	2,495	3,338,997	0.083	349	2,190
11	210.00	2,722	3,230,163	0.080	338	2,390
10	190.00	3,233	3,359,692	0.083	351	2,838
9	170.00	3,769	3,380,505	0.084	353	3,309
8	150.00	4,198	3,190,701	0.079	333	3,686
7	130.00	4,859	3,055,840	0.076	319	4,266
6	110.00	5,403	2,723,805	0.067	285	4,744
5	90.00	6,204	2,397,778	0.059	251	5,447
4	70.00	6,770	1,876,049	0.046	196	5,944
3	50.00	7,248	1,286,545	0.032	134	6,364
2	30.00	7,863	709,743	0.018	74	6,904
1	10.00	9,470	199,620	0.005	21	8,315
Ericsson RRUS 4490	250.00	205	306,697	0.008	32	180
Ericsson AIR 6419 B77D/C-Band (71 lbs)	250.00	213	318,355	0.008	33	187
Raycap RxxDC-6627-PF-48	250.00	32	47,828	0.001	5	28

Ericsson AIR 3283 B25 B66	250.00	324	484,258	0.012	51	284
Commscope NHH-65C-R2B	250.00	310	462,735	0.011	48	272
Unused Reserve (17489.70 sqin)	250.00	1,416	2,116,684	0.052	221	1,243
Generic Flat Low Profile Platform	250.00	1,875	2,802,417	0.069	293	1,646
Ceragon FibeAir IP-20D-HP	240.00	26	37,524	0.001	4	23
Ericsson Radio 4460 B25+B66	240.00	436	617,373	0.015	65	383
Ericsson Radio 4480 B71+B85A	240.00	336	475,774	0.012	50	295
Ericsson AIR 6419 B41	240.00	274	387,982	0.010	41	241
Commscope VHLP3-11WA	240.00	38	53,100	0.001	6	33
Generic Flat Light Sector Frame	240.00	1,200	1,699,192	0.042	178	1,054
Commscope FFVV-65C-R3-V1	240.00	498	705,731	0.018	74	438
Totals		**72,210**	**40,418,078**	**1.000**	**4,224**	**63,401**

1.2D + 1.0Ev + 1.0Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
13	245.00	792	1,152,991	0.028	80	968
12	230.00	2,495	3,338,997	0.083	233	3,049
11	210.00	2,722	3,230,163	0.080	225	3,327
10	190.00	3,233	3,359,692	0.083	234	3,950
9	170.00	3,769	3,380,505	0.084	236	4,605
8	150.00	4,198	3,190,701	0.079	222	5,130
7	130.00	4,859	3,055,840	0.076	213	5,938
6	110.00	5,403	2,723,805	0.067	190	6,603
5	90.00	6,204	2,397,778	0.059	167	7,581
4	70.00	6,770	1,876,049	0.046	131	8,273
3	50.00	7,248	1,286,545	0.032	90	8,857
2	30.00	7,863	709,743	0.018	49	9,609
1	10.00	9,470	199,620	0.005	14	11,572
Ericsson RRUS 4490	250.00	205	306,697	0.008	21	251
Ericsson AIR 6419 B77D/C-Band (71 lbs)	250.00	213	318,355	0.008	22	260
Raycap RxxDC-6627-PF-48	250.00	32	47,828	0.001	3	39
Ericsson AIR 3283 B25 B66	250.00	324	484,258	0.012	34	396
Commscope NHH-65C-R2B	250.00	310	462,735	0.011	32	378
Unused Reserve (17489.70 sqin)	250.00	1,416	2,116,684	0.052	147	1,731
Generic Flat Low Profile Platform	250.00	1,875	2,802,417	0.069	195	2,291
Ceragon FibeAir IP-20D-HP	240.00	26	37,524	0.001	3	32
Ericsson Radio 4460 B25+B66	240.00	436	617,373	0.015	43	533
Ericsson Radio 4480 B71+B85A	240.00	336	475,774	0.012	33	411
Ericsson AIR 6419 B41	240.00	274	387,982	0.010	27	335
Commscope VHLP3-11WA	240.00	38	53,100	0.001	4	46
Generic Flat Light Sector Frame	240.00	1,200	1,699,192	0.042	118	1,466
Commscope FFVV-65C-R3-V1	240.00	498	705,731	0.018	49	609
Totals		**72,210**	**40,418,078**	**1.000**	**2,816**	**88,241**

1.2D + 1.0Ev + 1.5Eh

Section/Appurtenance	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	Cvx	Horizontal Force (lb)	Vertical Force (lb)
13	245.00	792	1,152,991	0.028	121	968
12	230.00	2,495	3,338,997	0.083	349	3,049
11	210.00	2,722	3,230,163	0.080	338	3,327
10	190.00	3,233	3,359,692	0.083	351	3,950
9	170.00	3,769	3,380,505	0.084	353	4,605
8	150.00	4,198	3,190,701	0.079	333	5,130
7	130.00	4,859	3,055,840	0.076	319	5,938
6	110.00	5,403	2,723,805	0.067	285	6,603
5	90.00	6,204	2,397,778	0.059	251	7,581
4	70.00	6,770	1,876,049	0.046	196	8,273
3	50.00	7,248	1,286,545	0.032	134	8,857
2	30.00	7,863	709,743	0.018	74	9,609
1	10.00	9,470	199,620	0.005	21	11,572
Ericsson RRUS 4490	250.00	205	306,697	0.008	32	251
Ericsson AIR 6419 B77D/C-Band (71 lbs)	250.00	213	318,355	0.008	33	260
Raycap RxxDC-6627-PF-48	250.00	32	47,828	0.001	5	39
Ericsson AIR 3283 B25 B66	250.00	324	484,258	0.012	51	396
Commscope NHH-65C-R2B	250.00	310	462,735	0.011	48	378
Unused Reserve (17489.70 sqin)	250.00	1,416	2,116,684	0.052	221	1,731
Generic Flat Low Profile Platform	250.00	1,875	2,802,417	0.069	293	2,291
Ceragon FibeAir IP-20D-HP	240.00	26	37,524	0.001	4	32
Ericsson Radio 4460 B25+B66	240.00	436	617,373	0.015	65	533
Ericsson Radio 4480 B71+B85A	240.00	336	475,774	0.012	50	411
Ericsson AIR 6419 B41	240.00	274	387,982	0.010	41	335
Commscope VHLP3-11WA	240.00	38	53,100	0.001	6	46
Generic Flat Light Sector Frame	240.00	1,200	1,699,192	0.042	178	1,466
Commscope FFVV-65C-R3-V1	240.00	498	705,731	0.018	74	609
Totals		**72,210**	**40,418,078**	**1.000**	**4,224**	**88,241**

FORCE/STRESS SUMMARY

Section 1 – 0.0' to 20.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/4" SOLID	-471.25	1.2D + 1.0W N	6.676	100	100	100	61.04	50.00	741.88	0.00	0.00	0	0	64	Member X
D SAE - 4X4X0.375	-9.77	1.2D + 1.0W 330°	24.911	50	50	50	191.87	36.00	22.24	27.06	36.54	1	1	44	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/4" SOLID	395.31	0.9D + 1.0W 180°	50.0	65	974.16	0.00	0.00		0	0	41	Member
D SAE - 4X4X0.375	9.82	0.9D + 1.0W 330°	36.0	58	81.84	27.06	22.18	24.26	1	1	44	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	400.43	0.9D + 1.0W 180°	974.31	17	8	2.0" GR50
Bot Compression	477.11	1.2D + 1.0W N	999.29	43	8	2.0" GR50

FORCE/STRESS SUMMARY

Section 2 – 20.0' to 40.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/4" SOLID	-438.02	1.2D + 1.0W N	6.676	100	100	100	61.04	50.00	741.88	0.00	0.00	0	0	59	Member X
D SAE - 4X4X0.25	-9.69	0.9D + 1.0W 330°	23.182	50	50	50	174.96	35.71	18.14	27.06	24.36	1	1	53	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5 1/4" SOLID	370.19	0.9D + 1.0W 180°	50.0	65	974.16	0.00	0.00		0	0	38	Member
D SAE - 4X4X0.25	9.53	0.9D + 1.0W 330°	36.0	58	55.65	27.06	14.79	16.18	1	1	64	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	373.41	0.9D + 1.0W 180°	758.83	49	6	1 1/2 A325

Section 3 – 40.0' to 60.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5" SOLID	-403.62	1.2D + 1.0W N	6.676	100	100	100	64.09	50.00	654.37	0.00	0.00	0	0	62	Member X
D SAE - 4X4X0.25	-9.02	1.2D + 1.0W 330°	21.464	50	50	50	162.00	35.71	21.16	27.06	24.36	1	1	43	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5" SOLID	344.42	0.9D + 1.0W 180°	50.0	65	883.58	0.00	0.00		0	0	39	Member
D SAE - 4X4X0.25	8.89	0.9D + 1.0W 330°	36.0	58	55.65	27.06	14.79	16.18	1	1	60	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	347.69	0.9D + 1.0W 180°	758.83	46	6	1 1/2 A325

Section 4 – 60.0' to 80.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5" SOLID	-369.82	1.2D + 1.0W N	6.676	100	100	100	64.09	50.00	654.37	0.00	0.00	0	0	57	Member X
D SAE - 3.5x3.5x0.25	-8.19	1.2D + 1.0W 330°	19.761	50	50	50	172.34	36.00	16.29	27.06	24.36	1	1	50	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 5" SOLID	318.65	0.9D + 1.0W 180°	50.0	65	883.58	0.00	0.00		0	0	36	Member
D SAE - 3.5x3.5x0.25	8.06	0.9D + 1.0W 330°	36.0	58	47.49	27.06	14.79	16.18	1	1	54	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	321.97	0.9D + 1.0W 180°	758.83	42	6	1 1/2 A325

Section 5 – 80.0' to 100.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 3/4" SOLID	-336.65	1.2D + 1.0W N	6.676	100	100	100	67.46	50.00	571.73	0.00	0.00	0	0	59	Member X
D SAE - 3.5x3.5x0.25	-7.47	1.2D + 1.0W 330°	18.077	50	50	50	157.65	36.00	19.46	27.06	24.36	1	1	38	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 3/4" SOLID	292.96	0.9D + 1.0W 180°	50.0	65	797.44	0.00	0.00		0	0	37	Member
D SAE - 3.5x3.5x0.25	7.34	0.9D + 1.0W 330°	36.0	58	47.49	27.06	14.79	16.18	1	1	50	Bolt Bear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	296.39	0.9D + 1.0W 180°	758.83	39	6	1 1/2 A325

FORCE/STRESS SUMMARY

Section 6 – 100.0' to 120.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/2" SOLID	-304.01	1.2D + 1.0W N	6.676	100	100	100	71.21	50.00	493.98	0.00	0.00	0	0	62	Member X
D SAE - 3X3X0.25	-6.75	1.2D + 1.0W 330°	16.418	50	50	50	166.39	36.00	14.89	27.06	24.36	1	1	45	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/2" SOLID	267.24	0.9D + 1.0W 180°	50.0	65	715.68	0.00	0.00		0	0	37	Member
D SAE - 3X3X0.25	6.58	0.9D + 1.0W 330°	36.0	58	39.33	27.06	14.79	13.46	1	1	49	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	270.76	0.9D + 1.0W 180°	758.83	36	6	1 1/2 A325

FORCE/STRESS SUMMARY

Section 7 – 120.0' to 140.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/4" SOLID	-273.23	1.2D + 1.0W N	5.007	100	100	100	56.55	50.00	505.29	0.00	0.00	0	0	54	Member X
D SAE - 3X3X0.1875	-5.79	1.2D + 1.0W 330°	14.188	50	50	50	142.83	36.00	15.29	27.06	18.27	1	1	38	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4 1/4" SOLID	242.46	0.9D + 1.0W 180°	50.0	65	638.37	0.00	0.00		0	0	38	Member
D SAE - 3X3X0.1875	5.67	1.2D + 1.0W 330°	36.0	58	29.83	27.06	11.09	10.09	1	1	56	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	244.89	0.9D + 1.0W 180°	623.64	39	6	1.375" A325

Section 8 – 140.0' to 160.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4" SOLID	-241.67	1.2D + 1.0W N	5.007	100	100	100	60.08	50.00	434.30	0.00	0.00	0	0	56	Member X
D SAE - 2.5X2.5X0.1875	-5.11	1.2D + 1.0W 330°	12.52	50	50	50	151.75	36.00	11.21	27.06	18.27	1	1	46	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 4" SOLID	216.44	0.9D + 1.0W 180°	50.0	65	565.47	0.00	0.00		0	0	38	Member
D SAE - 2.5X2.5X0.1875	4.99	1.2D + 1.0W 330°	36.0	58	23.69	27.06	11.09	9.07	1	1	55	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	219.15	0.9D + 1.0W 180°	623.64	35	6	1.375" A325

Section 9 – 160.0' to 180.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 3/4" SOLID	-210.40	1.2D + 1.0W N	5.007	100	100	100	64.09	50.00	368.10	0.00	0.00	0	0	57	Member X
D SAE - 2.5X2.5X0.1875	-4.61	1.2D + 1.0W 330°	10.893	50	50	50	132.04	36.00	14.81	27.06	18.27	1	1	31	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 3/4" SOLID	189.97	0.9D + 1.0W 180°	50.0	65	497.02	0.00	0.00		0	0	38	Member
D SAE - 2.5X2.5X0.1875	4.49	1.2D + 1.0W 330°	36.0	58	23.69	27.06	11.09	9.07	1	1	50	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	192.90	0.9D + 1.0W 180°	623.64	31	6	1.375" A325

Section 10 – 180.0' to 200.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'_y (ksi)	$\Phi_c P_n$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 1/2" SOLID	-178.13	1.2D + 1.0W N	5.007	100	100	100	68.66	50.00	306.71	0.00	0.00	0	0	58	Member X
D SAE - 2X2X0.1875	-4.24	1.2D + 1.0W 330°	9.331	50	50	50	142.09	36.00	10.14	13.81	13.05	1	1	42	Member Z

Member Tension	Pu (kip)	Load Case	F_y (ksi)	F_u (ksi)	$\Phi_c Pn$ (kip)	Shear ΦR_{nv} (kip)	Bear ΦR_n (kip)	Blk Shear $\Phi_t P_n$ (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3 1/2" SOLID	162.02	0.9D + 1.0W 180°	50.0	65	432.94	0.00	0.00		0	0	37	Member
D SAE - 2X2X0.1875	4.10	1.2D + 1.0W 330°	36.0	58	19.12	13.81	7.83	6.83	1	1	60	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦR_{nt} (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	165.25	0.9D + 1.0W 180°	623.64	27	6	1.375" A325

FORCE/STRESS SUMMARY

Section 11 – 200.0' to 220.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	-143.69	1.2D + 1.0W N	4.005	100	100	100	64.09	50.00	235.59	0.00	0.00	0	0	61	Member X
H SAE - 2X2X0.1875	-0.21	1.2D + 1.0W 180°	4.502	100	100	100	137.12	36.00	10.88	13.81	13.05	1	1	2	Member Z
D SAE - 2X2X0.1875	-4.22	1.2D + 1.0W 330°	6.159	50	50	50	100.34	36.00	17.59	13.81	13.05	1	1	32	Bolt Bear

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 3" SOLID	131.30	0.9D + 1.0W 180°	50.0	65	318.10	0.00	0.00		0	0	41	Member
H SAE - 2X2X0.1875	0.03	0.9D + 1.0W 180°	36.0	58	19.12	13.81	7.83	6.83	1	1	0	Blk Shear
D SAE - 2X2X0.1875	4.05	1.2D + 1.0W 330°	36.0	58	19.12	13.81	7.83	6.83	1	1	59	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	134.35	0.9D + 1.0W 180°	623.64	22	6	1.375" A325

Section 12 – 220.0' to 240.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/2" SOLID	-95.62	1.2D + 1.0W N	4	100	100	100	76.80	50.00	143.55	0.00	0.00	0	0	67	Member X
D SAE - 2.5X2.5X0.25	-7.73	1.2D + 1.0W 210°	6.022	50	50	50	85.20	36.00	33.06	27.06	24.36	1	1	32	Bolt Bear

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 2 1/2" SOLID	86.81	0.9D + 1.0W 180°	50.0	65	220.95	0.00	0.00		0	0	39	Member
D SAE - 2.5X2.5X0.25	7.56	1.2D + 1.0W 330°	36.0	58	31.18	27.06	14.79	12.10	1	1	62	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	95.62	0.9D + 1.0W 180°	623.64	15	6	1.375" A325

Section 13 – 240.0' to 250.00'

Member Compression	Pu (kip)	Load Case	Len (ft)	Bracing % X	Y	Z	KL/R	F'y (ksi)	Φc Pn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 1 3/4" SOLID	-19.49	1.2D + 1.0W N	3.333	100	100	100	91.43	50.00	58.74	0.00	0.00	0	0	33	Member X
H SAE - 2X2X0.1875	-1.66	1.2D + 1.0W 180°	4.502	100	100	100	137.12	36.00	10.88	13.81	13.05	1	1	15	Member Z
D SAE - 2X2X0.1875	-3.77	1.2D + 1.0W 210°	5.602	50	50	50	93.98	36.00	18.59	13.81	13.05	1	1	29	Bolt Bear

Member Tension	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	ΦcPn (kip)	Shear ΦRnv (kip)	Bear ΦRn (kip)	Blk Shear Φt Pn (kip)	# Bolt	# Hole	Use %	Controls
L SOL - 1 3/4" SOLID	15.72	0.9D + 1.0W 180°	50.0	65	108.24	0.00	0.00		0	0	15	Member
H SAE - 2X2X0.1875	1.67	1.2D + 1.0W N	36.0	58	19.12	13.81	7.83	6.83	1	1	24	Blk Shear
D SAE - 2X2X0.1875	3.79	1.2D + 1.0W 330°	36.0	58	19.12	13.81	7.83	6.83	1	1	55	Blk Shear

Max Splice Forces	Pu (kip)	Load Case	ΦRnt (kip)	Use %	Num Bolts	Bolt Type
Bot Tension	18.64	0.9D + 1.0W 180°	218.07	9	4	1 A325

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	240.00	0.5161	-0.0057	0.3188	0.3188
1.0D + 1.0W Service 330° 60 mph Wind with No Ice	250.00	0.5725	-0.0057	0.4644	0.4645
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	240.00	0.5097	-0.0082	0.3175	0.3175
1.0D + 1.0W Service 300° 60 mph Wind with No Ice	250.00	0.5651	-0.0094	0.3028	0.3029
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	240.00	0.5314	-0.0080	0.3260	0.326
1.0D + 1.0W Service 240° 60 mph Wind with No Ice	250.00	0.5885	-0.0094	0.3066	0.3067
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	240.00	0.5156	-0.0050	0.3176	0.3176
1.0D + 1.0W Service 210° 60 mph Wind with No Ice	250.00	0.5719	-0.0062	0.4613	0.4613
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	240.00	0.5105	0.0009	0.3148	0.3148
1.0D + 1.0W Service 180° 60 mph Wind with No Ice	250.00	0.5666	0.0012	0.5144	0.5144
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	240.00	0.5314	0.0080	0.3260	0.326
1.0D + 1.0W Service 120° 60 mph Wind with No Ice	250.00	0.5885	0.0094	0.3066	0.3067
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	240.00	0.5146	0.0090	0.3200	0.3201
1.0D + 1.0W Service 90° 60 mph Wind with No Ice	250.00	0.5702	0.0103	0.1555	0.1559
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	240.00	0.5097	0.0082	0.3175	0.3175
1.0D + 1.0W Service 60° 60 mph Wind with No Ice	250.00	0.5651	0.0094	0.3028	0.3029
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	240.00	0.533	0.0014	0.3255	0.3255
1.0D + 1.0W Service Normal 60 mph Wind with No Ice	250.00	0.591	0.0005	0.5275	0.5275
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	240.00	0.119	-0.0004	0.0721	0.0721
0.9D - 1.0Ev + 1.0Eh 330° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	240.00	0.1189	0.0003	0.0716	0.0716
0.9D - 1.0Ev + 1.0Eh 300° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	240.00	0.119	0.0004	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 240° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	240.00	0.119	-0.0004	0.0721	0.0721
0.9D - 1.0Ev + 1.0Eh 210° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	240.00	0.1189	0.0003	0.0716	0.0716
0.9D - 1.0Ev + 1.0Eh 180° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	240.00	0.119	0.0004	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 120° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	240.00	0.119	-0.0004	0.0721	0.0721
0.9D - 1.0Ev + 1.0Eh 90° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	240.00	0.1189	0.0003	0.0716	0.0716
0.9D - 1.0Ev + 1.0Eh 60° Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	240.00	0.119	0.0004	0.0723	0.0723
0.9D - 1.0Ev + 1.0Eh Normal Seismic (Reduced DL)	250.00	0.1315	0.0000	0.0723	0.0723
1.2D + 1.0Ev + 1.0Eh 330° Seismic	240.00	0.1193	-0.0004	0.0726	0.0726
1.2D + 1.0Ev + 1.0Eh 330° Seismic	250.00	0.1319	0.0000	0.0727	0.0727
1.2D + 1.0Ev + 1.0Eh 300° Seismic	240.00	0.1193	0.0003	0.0720	0.072
1.2D + 1.0Ev + 1.0Eh 300° Seismic	250.00	0.1319	0.0000	0.0728	0.0728
1.2D + 1.0Ev + 1.0Eh 240° Seismic	240.00	0.1193	0.0004	0.0729	0.0729
1.2D + 1.0Ev + 1.0Eh 240° Seismic	250.00	0.1319	0.0000	0.0726	0.0726
1.2D + 1.0Ev + 1.0Eh 210° Seismic	240.00	0.1193	-0.0004	0.0726	0.0726
1.2D + 1.0Ev + 1.0Eh 210° Seismic	250.00	0.1319	0.0000	0.0727	0.0727
1.2D + 1.0Ev + 1.0Eh 180° Seismic	240.00	0.1193	0.0003	0.0720	0.072
1.2D + 1.0Ev + 1.0Eh 180° Seismic	250.00	0.1319	0.0000	0.0728	0.0728
1.2D + 1.0Ev + 1.0Eh 120° Seismic	240.00	0.1193	0.0004	0.0729	0.0729
1.2D + 1.0Ev + 1.0Eh 120° Seismic	250.00	0.1319	0.0000	0.0726	0.0726
1.2D + 1.0Ev + 1.0Eh 90° Seismic	240.00	0.1193	-0.0004	0.0726	0.0726
1.2D + 1.0Ev + 1.0Eh 90° Seismic	250.00	0.1319	0.0000	0.0727	0.0727
1.2D + 1.0Ev + 1.0Eh 60° Seismic	240.00	0.1193	0.0003	0.0720	0.072
1.2D + 1.0Ev + 1.0Eh 60° Seismic	250.00	0.1319	0.0000	0.0728	0.0728
1.2D + 1.0Ev + 1.0Eh Normal Seismic	240.00	0.1193	0.0004	0.0729	0.0729
1.2D + 1.0Ev + 1.0Eh Normal Seismic	250.00	0.1319	0.0000	0.0726	0.0726
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0" Radial Ice	240.00	0.1318	-0.0014	0.0814	0.0814
1.2D + 1.0Di + 1.0Wi 330° 30 mph Wind with 0" Radial Ice	250.00	0.1462	-0.0015	0.1182	0.1182
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0" Radial Ice	240.00	0.1301	-0.0020	0.0807	0.0807
1.2D + 1.0Di + 1.0Wi 300° 30 mph Wind with 0" Radial Ice	250.00	0.1442	-0.0024	0.0779	0.078
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0" Radial Ice	240.00	0.1352	-0.0020	0.0820	0.082

DEFLECTIONS AND ROTATIONS

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
1.2D + 1.0Di + 1.0Wi 240° 30 mph Wind with 0" Radial Ice	250.00	0.1496	-0.0024	0.0757	0.0757
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0" Radial Ice	240.00	0.1313	-0.0013	0.0801	0.0801
1.2D + 1.0Di + 1.0Wi 210° 30 mph Wind with 0" Radial Ice	250.00	0.1455	-0.0016	0.1147	0.1147
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0" Radial Ice	240.00	0.1301	0.0003	0.0795	0.0795
1.2D + 1.0Di + 1.0Wi 180° 30 mph Wind with 0" Radial Ice	250.00	0.1443	0.0003	0.1284	0.1284
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0" Radial Ice	240.00	0.1352	0.0020	0.0820	0.082
1.2D + 1.0Di + 1.0Wi 120° 30 mph Wind with 0" Radial Ice	250.00	0.1496	0.0024	0.0757	0.0757
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0" Radial Ice	240.00	0.1311	0.0022	0.0808	0.0809
1.2D + 1.0Di + 1.0Wi 90° 30 mph Wind with 0" Radial Ice	250.00	0.1452	0.0026	0.0411	0.0412
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0" Radial Ice	240.00	0.1301	0.0020	0.0807	0.0807
1.2D + 1.0Di + 1.0Wi 60° 30 mph Wind with 0" Radial Ice	250.00	0.1442	0.0024	0.0779	0.078
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0" Radial Ice	240.00	0.1359	0.0003	0.0832	0.0832
1.2D + 1.0Di + 1.0Wi Normal 30 mph Wind with 0" Radial Ice	250.00	0.1507	0.0003	0.1337	0.1337
0.9D + 1.0W 330° 119 mph Wind with No Ice (Reduced DL)	240.00	2.0231	-0.0263	1.2501	1.2504
0.9D + 1.0W 330° 119 mph Wind with No Ice (Reduced DL)	250.00	2.245	-0.0288	1.8236	1.8237
0.9D + 1.0W 300° 119 mph Wind with No Ice (Reduced DL)	240.00	1.9982	-0.0333	1.2463	1.2468
0.9D + 1.0W 300° 119 mph Wind with No Ice (Reduced DL)	250.00	2.2159	-0.0437	1.1900	1.1905
0.9D + 1.0W 240° 119 mph Wind with No Ice (Reduced DL)	240.00	2.0845	-0.0303	1.2829	1.2829
0.9D + 1.0W 240° 119 mph Wind with No Ice (Reduced DL)	250.00	2.3087	-0.0374	1.2084	1.209
0.9D + 1.0W 210° 119 mph Wind with No Ice (Reduced DL)	240.00	2.023	-0.0155	1.2495	1.2496
0.9D + 1.0W 210° 119 mph Wind with No Ice (Reduced DL)	250.00	2.2443	-0.0278	1.8172	1.8174
0.9D + 1.0W 180° 119 mph Wind with No Ice (Reduced DL)	240.00	2.0034	0.0013	1.2378	1.2378
0.9D + 1.0W 180° 119 mph Wind with No Ice (Reduced DL)	250.00	2.2241	0.0072	2.0209	2.021
0.9D + 1.0W 120° 119 mph Wind with No Ice (Reduced DL)	240.00	2.0845	0.0303	1.2829	1.2829
0.9D + 1.0W 120° 119 mph Wind with No Ice (Reduced DL)	250.00	2.3087	0.0374	1.2084	1.209
0.9D + 1.0W 90° 119 mph Wind with No Ice (Reduced DL)	240.00	2.0181	0.0383	1.2579	1.2582
0.9D + 1.0W 90° 119 mph Wind with No Ice (Reduced DL)	250.00	2.2364	0.0421	0.6101	0.6115
0.9D + 1.0W 60° 119 mph Wind with No Ice (Reduced DL)	240.00	1.9982	0.0333	1.2463	1.2468
0.9D + 1.0W 60° 119 mph Wind with No Ice (Reduced DL)	250.00	2.2159	0.0437	1.1900	1.1905
0.9D + 1.0W Normal 119 mph Wind with No Ice (Reduced DL)	240.00	2.0896	0.0085	1.2758	1.2758
0.9D + 1.0W Normal 119 mph Wind with No Ice (Reduced DL)	250.00	2.3173	0.0029	2.0756	2.0756
1.2D + 1.0W 330° 119 mph Wind with No Ice	240.00	2.0281	-0.0263	1.2543	1.2546
1.2D + 1.0W 330° 119 mph Wind with No Ice	250.00	2.2508	-0.0288	1.8278	1.8278
1.2D + 1.0W 300° 119 mph Wind with No Ice	240.00	2.0032	-0.0334	1.2504	1.2508
1.2D + 1.0W 300° 119 mph Wind with No Ice	250.00	2.2216	-0.0437	1.1937	1.1942
1.2D + 1.0W 240° 119 mph Wind with No Ice	240.00	2.0896	-0.0304	1.2867	1.2867
1.2D + 1.0W 240° 119 mph Wind with No Ice	250.00	2.3145	-0.0375	1.2112	1.2118
1.2D + 1.0W 210° 119 mph Wind with No Ice	240.00	2.0279	-0.0155	1.2533	1.2534
1.2D + 1.0W 210° 119 mph Wind with No Ice	250.00	2.2499	-0.0279	1.8204	1.8207
1.2D + 1.0W 180° 119 mph Wind with No Ice	240.00	2.0082	0.0012	1.2416	1.2416
1.2D + 1.0W 180° 119 mph Wind with No Ice	250.00	2.2296	0.0073	2.0245	2.0246
1.2D + 1.0W 120° 119 mph Wind with No Ice	240.00	2.0896	0.0304	1.2867	1.2867
1.2D + 1.0W 120° 119 mph Wind with No Ice	250.00	2.3145	0.0375	1.2112	1.2118
1.2D + 1.0W 90° 119 mph Wind with No Ice	240.00	2.023	0.0384	1.2618	1.2621
1.2D + 1.0W 90° 119 mph Wind with No Ice	250.00	2.242	0.0423	0.6145	0.6159
1.2D + 1.0W 60° 119 mph Wind with No Ice	240.00	2.0032	0.0334	1.2504	1.2508
1.2D + 1.0W 60° 119 mph Wind with No Ice	250.00	2.2216	0.0437	1.1937	1.1942
1.2D + 1.0W Normal 119 mph Wind with No Ice	240.00	2.0948	0.0085	1.2801	1.2801
1.2D + 1.0W Normal 119 mph Wind with No Ice	250.00	2.3232	0.0029	2.0801	2.0801

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					(-) Uplift and (+) Down		
	14.03	0.00	0	1	0.00	476.60	-40.70
1.2D + 1.0W Normal	14.03	0.00	120	1a	13.51	-194.98	-12.95
	14.03	0.00	240	1b	-13.51	-194.98	-12.95
	14.03	0.00	0	1	-3.86	239.27	-19.63
1.2D + 1.0W 60°	14.03	0.00	120	1a	-18.90	238.92	6.51
	14.03	0.00	240	1b	-30.18	-391.54	-17.45
	14.03	0.00	0	1	-4.67	28.90	-1.54
1.2D + 1.0W 90°	14.03	0.00	120	1a	-30.12	398.71	14.81
	14.03	0.00	240	1b	-27.71	-340.95	-13.27
	14.03	0.00	0	1	-4.49	-194.96	18.18
1.2D + 1.0W 120°	14.03	0.00	120	1a	-35.24	476.25	20.36
	14.03	0.00	240	1b	-17.96	-194.65	-5.24
	14.03	0.00	0	1	0.00	-391.85	34.86
1.2D + 1.0W 180°	14.03	0.00	120	1a	-15.08	239.25	13.14
	14.03	0.00	240	1b	15.08	239.25	13.14
	14.03	0.00	0	1	2.40	-341.32	30.64
1.2D + 1.0W 210°	14.03	0.00	120	1a	0.98	29.07	4.78
	14.03	0.00	240	1b	27.87	398.90	18.71
	14.03	0.00	0	1	4.49	-194.96	18.18
1.2D + 1.0W 240°	14.03	0.00	120	1a	17.96	-194.65	-5.24
	14.03	0.00	240	1b	35.24	476.25	20.36
	14.03	0.00	0	1	3.86	239.27	-19.63
1.2D + 1.0W 300°	14.03	0.00	120	1a	30.18	-391.54	-17.45
	14.03	0.00	240	1b	18.90	238.92	6.51
	14.03	0.00	0	1	2.27	399.11	-33.49
1.2D + 1.0W 330°	14.03	0.00	120	1a	25.33	-341.14	-17.40
	14.03	0.00	240	1b	3.64	28.69	-3.24
	14.03	0.00	0	1	0.00	468.73	-40.30
0.9D + 1.0W Normal	14.03	0.00	120	1a	13.84	-201.87	-13.15
	14.03	0.00	240	1b	-13.84	-201.87	-13.15
	14.03	0.00	0	1	-3.87	231.73	-19.23
0.9D + 1.0W 60°	14.03	0.00	120	1a	-18.56	231.39	6.31
	14.03	0.00	240	1b	-30.51	-398.13	-17.64
	14.03	0.00	0	1	-4.68	21.68	-1.14
0.9D + 1.0W 90°	14.03	0.00	120	1a	-29.77	390.94	14.61
	14.03	0.00	240	1b	-28.05	-347.63	-13.46
	14.03	0.00	0	1	-4.50	-201.85	18.56
0.9D + 1.0W 120°	14.03	0.00	120	1a	-34.89	468.38	20.16
	14.03	0.00	240	1b	-18.30	-201.54	-5.42
	14.03	0.00	0	1	0.00	-398.45	35.24
0.9D + 1.0W 180°	14.03	0.00	120	1a	-14.74	231.72	12.94
	14.03	0.00	240	1b	14.74	231.72	12.94
	14.03	0.00	0	1	2.40	-347.99	31.02
0.9D + 1.0W 210°	14.03	0.00	120	1a	1.33	21.85	4.59
	14.03	0.00	240	1b	27.52	391.13	18.51
	14.03	0.00	0	1	4.50	-201.85	18.56
0.9D + 1.0W 240°	14.03	0.00	120	1a	18.30	-201.54	-5.42
	14.03	0.00	240	1b	34.89	468.38	20.16
	14.03	0.00	0	1	3.87	231.73	-19.23
0.9D + 1.0W 300°	14.03	0.00	120	1a	30.51	-398.13	-17.64
	14.03	0.00	240	1b	18.56	231.39	6.31
	14.03	0.00	0	1	2.28	391.34	-33.09
0.9D + 1.0W 330°	14.03	0.00	120	1a	25.66	-347.82	-17.59
	14.03	0.00	240	1b	3.31	21.47	-3.44
	14.03	0.00	0	1	0.00	58.26	1.20
1.2D + 1.0Di + 1.0Wi Normal	14.03	0.00	120	1a	4.29	14.20	-2.81
	14.03	0.00	240	1b	-4.29	14.20	-2.81
	14.03	0.00	0	1	-0.26	42.73	2.60
1.2D + 1.0Di + 1.0Wi 60°	14.03	0.00	120	1a	2.13	42.69	-1.52

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
	14.03	0.00	240	1b	-5.40	1.23	-3.12
	14.03	0.00	0	1	-0.31	28.90	3.82
1.2D + 1.0Di + 1.0Wi 90°	14.03	0.00	120	1a	1.38	53.18	-0.97
	14.03	0.00	240	1b	-5.23	4.57	-2.85
	14.03	0.00	0	1	-0.29	14.22	5.12
1.2D + 1.0Di + 1.0Wi 120°	14.03	0.00	120	1a	1.04	58.22	-0.60
	14.03	0.00	240	1b	-4.58	14.22	-2.31
	14.03	0.00	0	1	0.00	1.23	6.24
1.2D + 1.0Di + 1.0Wi 180°	14.03	0.00	120	1a	2.38	42.71	-1.08
	14.03	0.00	240	1b	-2.38	42.71	-1.08
	14.03	0.00	0	1	0.15	4.57	5.96
1.2D + 1.0Di + 1.0Wi 210°	14.03	0.00	120	1a	3.46	28.89	-1.64
	14.03	0.00	240	1b	-1.53	53.19	-0.71
	14.03	0.00	0	1	0.29	14.22	5.12
1.2D + 1.0Di + 1.0Wi 240°	14.03	0.00	120	1a	4.58	14.22	-2.31
	14.03	0.00	240	1b	-1.04	58.22	-0.60
	14.03	0.00	0	1	0.26	42.73	2.60
1.2D + 1.0Di + 1.0Wi 300°	14.03	0.00	120	1a	5.40	1.23	-3.12
	14.03	0.00	240	1b	-2.13	42.69	-1.52
	14.03	0.00	0	1	0.15	53.22	1.68
1.2D + 1.0Di + 1.0Wi 330°	14.03	0.00	120	1a	5.08	4.56	-3.11
	14.03	0.00	240	1b	-3.15	28.87	-2.17
	14.03	0.00	0	1	0.00	51.96	-3.31
1.2D + 1.0Ev + 1.0Eh Normal	14.03	0.00	120	1a	-0.70	16.69	0.27
	14.03	0.00	240	1b	0.70	16.69	0.27
	14.03	0.00	0	1	-0.12	40.20	-2.46
1.2D + 1.0Ev + 1.0Eh 60°	14.03	0.00	120	1a	-2.18	40.20	1.13
	14.03	0.00	240	1b	-0.10	4.94	-0.06
	14.03	0.00	0	1	-0.13	28.45	-1.60
1.2D + 1.0Ev + 1.0Eh 90°	14.03	0.00	120	1a	-2.70	48.81	1.48
	14.03	0.00	240	1b	0.06	8.09	0.11
	14.03	0.00	0	1	-0.12	16.69	-0.74
1.2D + 1.0Ev + 1.0Eh 120°	14.03	0.00	120	1a	-2.87	51.96	1.66
	14.03	0.00	240	1b	0.58	16.69	0.47
	14.03	0.00	0	1	0.00	4.94	0.12
1.2D + 1.0Ev + 1.0Eh 180°	14.03	0.00	120	1a	-2.07	40.20	1.33
	14.03	0.00	240	1b	2.07	40.20	1.33
	14.03	0.00	0	1	0.07	8.09	-0.11
1.2D + 1.0Ev + 1.0Eh 210°	14.03	0.00	120	1a	-1.32	28.45	0.91
	14.03	0.00	240	1b	2.64	48.81	1.60
	14.03	0.00	0	1	0.12	16.69	-0.74
1.2D + 1.0Ev + 1.0Eh 240°	14.03	0.00	120	1a	-0.58	16.69	0.47
	14.03	0.00	240	1b	2.87	51.96	1.66
	14.03	0.00	0	1	0.12	40.20	-2.46
1.2D + 1.0Ev + 1.0Eh 300°	14.03	0.00	120	1a	0.10	4.94	-0.06
	14.03	0.00	240	1b	2.18	40.20	1.13
	14.03	0.00	0	1	0.07	48.81	-3.08
1.2D + 1.0Ev + 1.0Eh 330°	14.03	0.00	120	1a	-0.13	8.09	0.00
	14.03	0.00	240	1b	1.45	28.45	0.68
	14.03	0.00	0	1	0.00	43.91	-2.86
0.9D - 1.0Ev + 1.0Eh Normal	14.03	0.00	120	1a	-0.31	8.71	0.04
	14.03	0.00	240	1b	0.31	8.71	0.04
	14.03	0.00	0	1	-0.12	32.18	-2.01
0.9D - 1.0Ev + 1.0Eh 60°	14.03	0.00	120	1a	-1.80	32.18	0.90
	14.03	0.00	240	1b	-0.49	-3.03	-0.28
	14.03	0.00	0	1	-0.13	20.44	-1.15
0.9D - 1.0Ev + 1.0Eh 90°	14.03	0.00	120	1a	-2.32	40.77	1.26
	14.03	0.00	240	1b	-0.33	0.11	-0.11
0.9D - 1.0Ev + 1.0Eh 120°	14.03	0.00	0	1	-0.12	8.71	-0.29

*(-) Uplift and (+) Down

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					(-) Uplift and (+) Down		
	14.03	0.00	120	1a	-2.48	43.91	1.43
	14.03	0.00	240	1b	0.19	8.71	0.24
	14.03	0.00	0	1	0.00	-3.03	0.57
0.9D - 1.0Ev + 1.0Eh 180°	14.03	0.00	120	1a	-1.68	32.18	1.10
	14.03	0.00	240	1b	1.68	32.18	1.10
	14.03	0.00	0	1	0.07	0.11	0.34
0.9D - 1.0Ev + 1.0Eh 210°	14.03	0.00	120	1a	-0.93	20.44	0.69
	14.03	0.00	240	1b	2.25	40.77	1.38
	14.03	0.00	0	1	0.12	8.71	-0.29
0.9D - 1.0Ev + 1.0Eh 240°	14.03	0.00	120	1a	-0.19	8.71	0.24
	14.03	0.00	240	1b	2.48	43.91	1.43
	14.03	0.00	0	1	0.12	32.18	-2.01
0.9D - 1.0Ev + 1.0Eh 300°	14.03	0.00	120	1a	0.49	-3.03	-0.28
	14.03	0.00	240	1b	1.80	32.18	0.90
	14.03	0.00	0	1	0.07	40.77	-2.63
0.9D - 1.0Ev + 1.0Eh 330°	14.03	0.00	120	1a	0.26	0.11	-0.23
	14.03	0.00	240	1b	1.06	20.44	0.46
	14.03	0.00	0	1	0.00	138.63	-11.42
1.0D + 1.0W Service Normal	14.03	0.00	120	1a	2.68	-33.21	-2.87
	14.03	0.00	240	1b	-2.68	-33.21	-2.87
	14.03	0.00	0	1	-1.02	77.94	-5.98
1.0D + 1.0W Service 60°	14.03	0.00	120	1a	-5.68	77.84	2.11
	14.03	0.00	240	1b	-6.97	-83.57	-4.03
	14.03	0.00	0	1	-1.22	24.08	-1.31
1.0D + 1.0W Service 90°	14.03	0.00	120	1a	-8.58	118.73	4.26
	14.03	0.00	240	1b	-6.33	-70.60	-2.96
	14.03	0.00	0	1	-1.16	-33.19	3.76
1.0D + 1.0W Service 120°	14.03	0.00	120	1a	-9.89	138.53	5.71
	14.03	0.00	240	1b	-3.83	-33.13	-0.89
	14.03	0.00	0	1	0.00	-83.63	8.05
1.0D + 1.0W Service 180°	14.03	0.00	120	1a	-4.67	77.92	3.87
	14.03	0.00	240	1b	4.67	77.92	3.87
	14.03	0.00	0	1	0.61	-70.68	6.97
1.0D + 1.0W Service 210°	14.03	0.00	120	1a	-0.53	24.11	1.70
	14.03	0.00	240	1b	7.98	118.78	5.30
	14.03	0.00	0	1	1.16	-33.19	3.76
1.0D + 1.0W Service 240°	14.03	0.00	120	1a	3.83	-33.13	-0.89
	14.03	0.00	240	1b	9.89	138.53	5.71
	14.03	0.00	0	1	1.02	77.94	-5.98
1.0D + 1.0W Service 300°	14.03	0.00	120	1a	6.97	-83.57	-4.03
	14.03	0.00	240	1b	5.68	77.84	2.11
	14.03	0.00	0	1	0.61	118.85	-9.56
1.0D + 1.0W Service 330°	14.03	0.00	120	1a	5.73	-70.65	-4.01
	14.03	0.00	240	1b	1.73	24.02	-0.39
	14.03	0.00	0	1	0.00	63.96	-4.19
1.2D + 1.0Ev + 1.5Eh Normal	14.03	0.00	120	1a	-0.35	10.69	0.00
	14.03	0.00	240	1b	0.35	10.69	0.00
	14.03	0.00	0	1	-0.17	46.08	-2.89
1.2D + 1.0Ev + 1.5Eh 60°	14.03	0.00	120	1a	-2.58	46.08	1.29
	14.03	0.00	240	1b	-0.85	-6.81	-0.49
	14.03	0.00	0	1	-0.20	28.45	-1.60
1.2D + 1.0Ev + 1.5Eh 90°	14.03	0.00	120	1a	-3.38	59.21	1.83
	14.03	0.00	240	1b	-0.61	-2.31	-0.24
	14.03	0.00	0	1	-0.17	10.82	-0.31
1.2D + 1.0Ev + 1.5Eh 120°	14.03	0.00	120	1a	-3.61	63.71	2.09
	14.03	0.00	240	1b	0.18	10.82	0.30
	14.03	0.00	0	1	0.00	-7.07	1.00
1.2D + 1.0Ev + 1.5Eh 180°	14.03	0.00	120	1a	-2.42	46.21	1.60
	14.03	0.00	240	1b	2.42	46.21	1.60

DETAILED REACTIONS

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX* (kip)	FY* (kip)	FZ* (kip)
					(-) Uplift and (+) Down		
	14.03	0.00	0	1	0.10	-2.09	0.63
1.2D + 1.0Ev + 1.5Eh 210°	14.03	0.00	120	1a	-1.28	28.45	0.97
	14.03	0.00	240	1b	3.27	58.99	2.00
	14.03	0.00	0	1	0.17	10.82	-0.31
1.2D + 1.0Ev + 1.5Eh 240°	14.03	0.00	120	1a	-0.18	10.82	0.30
	14.03	0.00	240	1b	3.61	63.71	2.09
	14.03	0.00	0	1	0.17	46.08	-2.89
1.2D + 1.0Ev + 1.5Eh 300°	14.03	0.00	120	1a	0.85	-6.81	-0.49
	14.03	0.00	240	1b	2.58	46.08	1.29
	14.03	0.00	0	1	0.10	58.99	-3.83
1.2D + 1.0Ev + 1.5Eh 330°	14.03	0.00	120	1a	0.50	-2.09	-0.40
	14.03	0.00	240	1b	1.48	28.45	0.63
	14.03	0.00	0	1	0.00	55.90	-3.74
0.9D - 1.0Ev + 1.5Eh Normal	14.03	0.00	120	1a	0.04	2.71	-0.23
	14.03	0.00	240	1b	-0.04	2.71	-0.23
	14.03	0.00	0	1	-0.17	38.04	-2.44
0.9D - 1.0Ev + 1.5Eh 60°	14.03	0.00	120	1a	-2.20	38.04	1.07
	14.03	0.00	240	1b	-1.24	-14.77	-0.71
	14.03	0.00	0	1	-0.20	20.44	-1.15
0.9D - 1.0Ev + 1.5Eh 90°	14.03	0.00	120	1a	-2.99	51.15	1.61
	14.03	0.00	240	1b	-1.00	-10.26	-0.46
	14.03	0.00	0	1	-0.17	2.84	0.14
0.9D - 1.0Ev + 1.5Eh 120°	14.03	0.00	120	1a	-3.22	55.65	1.86
	14.03	0.00	240	1b	-0.21	2.84	0.08
	14.03	0.00	0	1	0.00	-15.01	1.45
0.9D - 1.0Ev + 1.5Eh 180°	14.03	0.00	120	1a	-2.03	38.17	1.37
	14.03	0.00	240	1b	2.03	38.17	1.37
	14.03	0.00	0	1	0.10	-10.05	1.08
0.9D - 1.0Ev + 1.5Eh 210°	14.03	0.00	120	1a	-0.89	20.44	0.75
	14.03	0.00	240	1b	2.88	50.93	1.78
	14.03	0.00	0	1	0.17	2.84	0.14
0.9D - 1.0Ev + 1.5Eh 240°	14.03	0.00	120	1a	0.21	2.84	0.08
	14.03	0.00	240	1b	3.22	55.65	1.86
	14.03	0.00	0	1	0.17	38.04	-2.44
0.9D - 1.0Ev + 1.5Eh 300°	14.03	0.00	120	1a	1.24	-14.77	-0.71
	14.03	0.00	240	1b	2.20	38.04	1.07
	14.03	0.00	0	1	0.10	50.93	-3.38
0.9D - 1.0Ev + 1.5Eh 330°	14.03	0.00	120	1a	0.89	-10.05	-0.63
	14.03	0.00	240	1b	1.09	20.44	0.40

MAXIMUM REACTIONS SUMMARY

	Individual	Individual w/ Overstrength	Global (DL+WL+IL)		Global (DL+WL)	
Max Uplift:	398.45	398.45	Moment Ice:	618.26 (kip-ft)	Moment:	9422.82 (kip-ft)
Max Down:	476.6	476.6	Total Down Ice:	86.65 (kip)	Total Down:	86.65 (kip)
Max Shear:	40.7	40.7	Total Shear Ice:	4.43 (kip)	Total Shear:	66.61 (kip)

1.2D + 1.0W Normal